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Introduction. Le réel, c'est l'impossible: the sublime time of special effects

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1 Christian Metz, 'Trucage and the film', *Critical Inquiry* (Summer 1977), pp. 657–75.
2 See, especially, Harold A. Innis, *The Bias of Communication* (Toronto: University of Toronto Press, 1951); *Empire and Communications*, revised Mary Q Innis (Toronto: University of Toronto Press, 1972).
3 Notably in Marshall McLuhan, *The Gutenberg Galaxy* (London: Routledge and Kegan Paul, 1962); *Understanding Media: the Extensions of Man* (London: Sphere, 1964).
4 See: Friedrich Kittler, 'Gramophone, film, typewriter', trans. Dorothe von Mücke, in *October*, no. 41 (Summer 1987), pp. 101–18; *Discourse Networks 1800/1900*, trans. Michael Metteer with Chris Cullens (Stanford, CT: Stanford University Press, 1990); in J. Johnston (ed.), *Literature, Media, Information Systems: Essays* (Amsterdam: G+B Arts International, 1997).
5 Notably in Régis Debray, *Cours de médiologie générale* (Paris: NRF, 1991); *Manifestes médiologiques* (Paris: Gallimard, 1994).
6 See for example: Kevin Kelly, *Out of Control: the New Biology of Machines* (London: Fourth Estate, 1994); Howard Rheingold, *The Virtual Community: Homesteading on the Electronic Frontier* (New York: HarperCollins, 1993); Nicholas Negroponte, *Being Digital* (London: Coronet, 1995).

If, as Metz constantly reminds us,[1] cinema is itself a special effect; if cinema and, for some years now, television have sought to replicate that sense of awe that once surrounded them at the times of their invention; and if there is a common intuition among reviewers, critics and scholars that something has changed in the nature of cinema – something to do with the decay of familiar narrative and performance values in favour of the qualities of the blockbuster – then in the field of special effects we are dealing with a history which is also contemporary, a historical process which is incomplete. Fearful of the *grand récit*, we are unlikely to commit to a teleology for this process. But it is common enough to understand it as a process of loss. In the 'previously... but now...' structure of classical postmodernism, the sense of loss is palpable, most of all in the writings of Jean Baudrillard, Fredric Jameson and Paul Virilio. Such a historical quasi-narrative (quasi because it has a beginning and a middle but no end) is characteristic of the tradition I will refer to as media theory, the general history of media inaugurated by Harold A. Innis,[2] given currency by his student and fellow Canadian Marshall McLuhan,[3] and reworked by commentators as diverse as Friedrich Kittler,[4] Régis Debray,[5] and the writers associated with *Wired*, the US digital lifestyle magazine.[6] Media theory is grounded in the ascription of medium-specific powers, initially to alphabetization and printing, latterly to the micro-scale shifts within, especially, image technologies. Its address is to what Yvonne

Spielmann, in this issue, refers to as the 'perceptual environment', those wider cultural formations in which not only the media function, but which are seen as effects of specific media technologies. In many respects the tradition is democratic in inspiration: Innis in particular is devoted to the re-establishment of orality as the basis for democratic communication. In others, especially in the work of Baudrillard and Virilio, the outlook is more bleak.

For Baudrillard, the electronic media are responsible for the death of reality, replacing the older referential media with an entirely self-replicating Code. The generation of special effects would appear to be a particularly happy hunting-ground for evidence of his conception of the hyperreal. But Baudrillard is locked into an immiserating structural linguistics, for which, since no representation is ever identical with its referent, no representation is ever adequate. Baudrillard merely adds the observation that this inadequacy is founded on an impossibility – the impossibility of adequacy – in order to declare the end of representation. His work has a salutary effect: it alleviates the necessity to work through the impasses of representation theory in the context of special effects. We recognize that there is something other than representation at stake. He identifies himself with the Byzantine iconoclasts, whose rage to destroy images rose precisely because they sensed this omnipotence of simulacra, this facility they have of effacing God from the consciousness of men, and the overwhelming, destructive truth which they suggest: that ultimately there has never been any God, that only the simulacrum exists, indeed that God himself has only ever been his own simulacrum.[7]

There is then no truth behind the simulacrum, and no ideological critique can do more than lose its way trying to find one. Yet the disappearance of truth in signification, which he equates with the loss of reality, concerns only one aspect of the sign: its reference. What remains is the communicative.

In this context, Virilio's position is the more interesting. His thought is premissed not on a discredited structuralism but in a peculiarly Christian-humanist phenomenology, in some ways reminiscent of Bazin. At the heart of his conception lies the Husserlian belief that there is no intervening moment between perception and cognition, that the world and the perception of the world are simultaneous, and that this simultaneity is foundational for the human habitation of the world. The technological mediation of perception, however, intervenes to obfuscate and ultimately destroy the ' "natural reality" of classical experience',[8] in a historical process he associates with the growth of a civilization based on the militarization of daily life. As Rosalind Krauss points out, however, Husserl was constrained by nineteenth-century psychological science to accommodate the 'retentions and protensions', memories and expectations, which shape the moment of perception, leading him to

7 Jean Baudrillard, 'The precession of simulacra', in *Simulations*, trans. Paul Foss (New York: Semiotext(e), 1983), p. 8.

8 Paul Virilio, *The Vision Machine*, trans. Julie Rose (London: British Film Institute, 1994), p. 76.

9 Jacques Derrida, *Speech and Phenomena*, trans. David B Allison (Evanston, IL: Northwestern University Press, 1973), pp. 60–69.

10 Rosalind E. Krauss, *The Optical Unconscious* (Cambridge, MA: MIT Press, 1993), p. 216.

11 Walter Benjamin, 'The work of art in the age of mechanical reproduction', in Hannah Arendt (ed.), *Illuminations*, trans. Harry Zohn (New York: Schocken, 1969), p. 237.

propose a 'primary memory' immediate to the now. Krauss points out, following Derrida's argument in *Speech and Phenomena*,[9] that 'this nonpresent carried into the present, this not-now infecting the now. . . points to the very temporality of consciousness's putative "present" that phenomenology cannot acknowledge'.[10] It is in this time of perception that mediation operates, even before the moment of technological intervention. Virilio's humanism rests on the conformity of the moment of perception with a whole movement of the world, its velocity, the gestalt of an instant in the same Husserlian *Augenblick* as the gestalt of its perception. But, he argues, if the world accelerates, in the increasing speeds and decreasing scale of mechanical perception, then the first moment – that of perception – is no longer swift enough to seize it: this is the moment of cinema. The phenomenon Virilio seeks to grasp is the same as that read rather differently in Walter Benjamin's concept of the 'unconscious optics',[11] the moment of unformed time in the interval between gestalts, the temporality of the blink. If, on the other hand, we accelerate the senses through nano-technological prosthetics, the sensorium outpaces, and can no longer be identified with, consciousness. In either case, Virilio bemoans the collapse not so much of reality as of self-identity in the relation of subject to world.

Like Baudrillard, then, Virilio bases his pessimism on the collapse of the individual's relation to reality. The crises – of signification in Baudrillard and of perception in Virilio – lead to a similar nihilism. The position of special effects in this is, of course, that of evidence, all effects equally and indiscriminately guilty of the murder of reality and of the human. Even when such thinkers as Gianni Vattimo place a positive spin on this lost relation between self and world, we have little sense of the mechanisms and specific techniques employed in its destruction. Placing in contrast to Adorno's critical theory 'the Heideggerian analysis of the connection between metaphysics, humanism and technology', Vattimo argues that:

> the subject that supposedly has to be defended from technological dehumanisation is itself the very root of this dehumanisation, since the kind of subjectivity which is defined strictly as the subject of the object is a pure function of the world of objectivity, and inevitably tends to become itself an object of manipulation.[12]

12 Gianni Vattimo, *The End of Modernity: Nihilism and Hermeneutics in Post-Modern Culture*, trans. Jon R. Snyder (Cambridge: Polity Press, 1988), p. 46.

13 Ibid., p. 29.

Proposing an 'accomplished nihilism' based in the thought of Nietzsche and Heidegger, Vattimo is left with the remainder of his 'weak thought': 'a fictionalised experience of reality which is also our only possibility for freedom'.[13] Taking care to distinguish this philosophical freedom from the discourse of personal creativity which surrounds digital media, we are still obliged to recognize in Vattimo's account of media technologies the indifference to the particular that characterizes the media theory tradition.

Film criticism, by contrast, tends to eschew the bluff generalization

14 Dudley Andrew, *Concepts in Film Theory* (Oxford: Oxford University Press, 1984), p. 190.

15 The morph is also the central figure in a remarkable forthcoming collection of essays edited by Vivian Sobchack, *Meta-Morphing: Visual Transformation and the Culture of Quick Change* (Minneapolis, MN: University of Minnesota Press, forthcoming 1999/2000).

16 Andrew, *Concepts in Film Theory*, p. 188, citing Nelson Goodman, *Languages of Art* (Indianapolis, IN: Hackett, 1977), pp. 51–66.

in favour of the meticulous analysis of the techniques, texts and groups of texts produced in the medium. Scrupulous attention to detail provides the basis for analysis, and interpretation is in general the goal of the process. One of the leading practitioners of the art, Dudley Andrews, concludes a study of it with the admonition that 'film studies will only progress by interrogating concrete instances for their systematic ramifications, and that in turn these ramifications are of interest only insofar as they return us to those aspects of our experience which are particular and unsystematic'.[14] Whether such analysis depends upon the close reading of texts, as in the analysis of *Jurassic Park* by Warren Buckland in this issue, or of particular techniques like the morph in Spielmann's essay,[15] the critic proceeds by first submitting her or himself to the film. It may, however, be argued that this position is in itself doubtful, given Vattimo's strictures on the manipulative cycle of the subject–object relation. If the subject of an object, the critic of the film, fully subjects her or himself to that object, does she or he run the risk of becoming an object for that subject? There are two responses to this. On the one hand, the critic can focus not on the film but on the experience of the film, as in McMahan's essay in this issue on audience response. The second depends upon the very particular nature of the subjection, and this in turn on the nature of the object. Here again Andrew is illuminating. Here the representational is confined to a single function of the text, an informational quality which may or may not be important and may or may not be possible. And although Andrew reserves the term 'expression' for artistic texts, where we might want to extend the concept to all cultural artefacts, he does introduce through it a further aspect vital to any analysis of the cinema of special effects, the matter of address.

> To say that a text or artefact represents a person or idea or state of affairs suggests that there exists a determinate, public referent which the signifiers aim to call up. The job of the audience or reader is to fill in the cues in order to complete the representation. But artistic artefacts and texts reserve for themselves the additional term 'expression' to which no mechanical filling in is adequate. An expression, in Nelson Goodman's terms, exemplifies that which it represents. It is an embodiment of itself.[16]

Communication is an essentially relational phenomenon. In the cinema of special effects, the matter of the communication is then not an external referent but the relationship instigated between the film and the viewer. In film theory, this has traditionally been termed the mode of address, but this may be too one-sided a construction of the communicative scenario. The critical questions are: what is being communicated and to whom; that is, who is being constituted as object or subject of the communication? On the one hand, in the media-theoretical tradition, the response might be that the other term

of the communicative relation is the studio, the apparatus or the Code, leaving us once more sitting in the dark with the typically solipsistic post-human victim of postmodernization. The film-critical tradition, on the other hand, demands that prior to answering these questions, we engage in an analysis of the material form of the mediation inherent in any act of communication. In what follows, I would like to offer some thoughts on a specific aspect of this materiality of communication in special-effects cinema, the question of temporality raised earlier in the context of Virilio's broken phenomenology.

In a certain sense, as a number of authors have proposed, we inhabit not a new Renaissance but a new Baroque.[17] Baroque visuality, premissed on the expression of absolute monarchy and the transcendent theology of the counter-reformation, was fascinated by *trompe l'oeil*, and by the vertiginous false perspectives of the painted ceiling. But despite its name, *trompe l'oeil* wants not to trick, but to be discovered in the act of trickery. What the baroque *trompe l'oeil* seeks to communicate is not the referent of its play of light – which in any case is ineffable – but the spectacle of the image itself. In this sense, representation is itself the most special of special effects, and, as Lev Manovich argues,[18] is at best a special case in a history of animated imaging for which the photographic has been merely a brief historical detour. But since we have lost the sense of the miraculous nature of representation (captured fleetingly in Baudrillard's account of the iconoclasm), we confront in its raw form the miracle of picturing. As in the most monumental ceilings of the Baroque, we confront in the special effect as such – the effect as it appears in films like *Independence Day* (Roland Emmerich, 1996), *Armageddon* (Michael Bay, 1998) or *Volcano* (Mike Jackson, 1997), not in the service of narrative but as the purpose for which the narrative exists – not the representation but its obverse: the sublime.

The beautiful is ephemeral, but the sublime points towards eternity. Beauty alludes to loss – ecological fragility, the Being-towards-death, the *manque-à-être*. The sublime, however, from the early films of Méliès and Phalke, points towards a time beyond the

17 See for example Omar Calabrese, *Neo-Baroque: a Sign of the Times*, trans. Charles Lambert (Princeton, NJ: Princeton University Press, 1992), Christine Buci-Glucksmann, *Baroque Reason: the Aesthetics of Modernity*, trans. Patrick Camiller (London: Sage, 1994); Gilles Deleuze, *The Fold: Leibniz and the Baroque*, trans. Tom Conley (London: Athlone, 1993).

18 Les Manovich, What is digital cinema?', in Peter Lunenfeld (ed.), *The Digital Dialectics: New Essays on New Media* (Cambridge, MA: MIT Press, 1999 forthcoming). Published online at http://jupiter.ucsd.edu/~manovich/text/digital-cinema.html

Armageddon (Michael Bay, 1998). Distributor: Buena Vista.
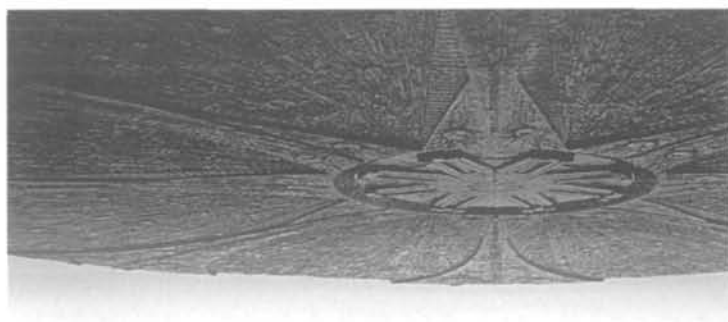
[19] Martin Heidegger, *Being and Time*, trans. John MacQuarrie and Edward Robinson (Oxford: Basil Blackwell, 1962), esp. pp. 279–311

mundane, a post-mortem time, or a time of the gods. The different temporality which the special effect occupies *vis-à-vis* the time of narrative indicates its extra-historical, extra-temporal status. Spectacle, abandoning duration along with any sense of loss, ephemerality or beauty, in their place establishes the punctual and fulfilled moment outside time, so cutting the Gordian knot of representation. The time of the miraculous, sublime time, is always outside causality: it cannot be expected or intended, and so cannot share the commonality of either experiential time or historical time. But if, according to the Heideggerian thesis,[19] the key time excluded from commonality is the moment of one's own death, we can

perhaps suggest that the time of sublimity, as constructed in mediation, functions as its internal negation, the pre-figuring of a zero degree of communication: a mimesis of death as the end of communication. By constructing its own end as mediation, mediation establishes its own position as object of anxiety and desire, the still point at which the communicative departs from commonality to become object.

Laying a second temporal axis across the narrative time of the film brings on marvel at the capabilities of the medium itself, throwing before the audience the specificity of the medium as well as a terminal form of illusion that succeeds by exceeding the apparent limits of the medium. This is why effects must always be cutting-edge, and why, in time, they either appear more quaint than equivalent narrative effects, or become, like Méliès's hearse, so deeply entrenched in the medium as to become subliminal. But at the moment of its arrival, the sublime effect, in transcending the medium through the medium's own resources, has the appearance of speaking the ineffable. In this way it circumscribes its own sublimity, identifying the boundary of communication with the technical limits of mediation. This mimesis of the end of communication is not representational but illusionistic, in that the medium exceeds itself in depicting the invisible. In temporal terms, what is achieved is the equally paradoxical narration of eternity. This is why effects require a different temporality, and why they lie athwart the narration. In this sense, they function as fetishistic interruptions of the narrative. Indeed, we should regard such fetishistic moments as the 'Diamonds are a Girl's Best Friend' routine from *Gentlemen Prefer Blondes* (Howard Hawks, 1957) as of a kind with the warp factor of the Starship Enterprise, and Monroe's miraculous body as a cinematic special effect.

The example of Monroe is, I admit, a knowing one, since she figures iconically not only as sex symbol but as the marriage of sex and death. To the modes of timelessness familiar to the baroque – eternity, death, nature – the nineteenth century adds that of the unconscious, and the twentieth century that of media technology, our 'second nature'. The technological sublime of special-effects cinema acts as a leap of faith that guarantees – in its abstraction from it, its negation of it, and its figuration of its limits – the narrative time of representation. In other words, for the majority of special-effects films, the sublime effect functions to underwrite a system of representation in crisis. By picturing the impossible real, by offering stillness at the heart of the motion picture, it legitimates narration, and underwrites the ideological by evading history in its specifically ahistorical temporality.

But it could also be said that in the effect we are introduced to the time of mediation from the point of view of mediation itself. As a quantum of energy travelling at the speed of light experiences no time, so the processes of mediation are atemporal when seen by the elementary particles of mediation themselves: figuratively, the still frame has no idea that it is in motion. So spectacular time also draws on the time of mediation, but in so doing, withdraws the time of mediation from the time of communication, the phenomenologically experienced time of the spectator, so throwing the temporality of representation back into crisis.

In this second moment, effects need only position themselves as mediations in the timeless time of mediation. As such, effects technologies produce spectacles incapable of working beyond a purely mediative time abstracted from social, historical time and divorced from communication. Communicative time is, however, trapped in the impasses of representational time in crisis, contained by narrative and in danger of disappearing into the purity of the commodity's trans-historical temporal frame. Such, at least, would be the upshot of an extension of media-theoretical nihilism into a historical model. One looks to the film-critical tradition to reopen the closing shutter of this encroaching camera obscura. At various points in the essays in this issue, the authors point toward such critical approaches to crisis. It remains to be seen whether, among the possible worlds evoked by Buckland, there comes Benjamin's messianic *Jetzeit*; whether the sublime time of the spectacle is also capable of prising open the gates of history.

Expanding film into digital media

YVONNE SPIELMANN

As cinema has appropriated video and computer technologies in its
production and as digital imagery becomes more prominent and
sometimes less distinguishable from analogue imagery, the nature of
the image changes fundamentally. The transformation of the
cinematic moving image occurs when cinematic devices are
transformed through the use of electronic and digital media. The
process of imaging changes fundamentally, and the forms and
structures of visual presentation in particular are affected by the
process. By analysing these processes of transformation as they are
reflected in the structure and form of the images, we may gain
insight into structural shifts in the organization of the image that
result from the interrelation and convergence of analogue-recorded
and digitally encoded images. I consider the processes involved in
effecting this conceptual change in the notion of the image to be a
shift, not a break. This calls for a closer examination of the
influences that new media have on existing media, and vice versa.

I

Current debates on imaging and visuality address the shift in the arts
caused by new technologies in terms of rupture and break, while the
similarities and continuities, even in historical accounts, are relatively
unexamined. The challenge of digital technologies – transformation
of production processes, changes in the mode of distribution,
expansion of access to production technology – is commonly
described in terms of the 'new'. Digital discourse promises novelty,
describing these changes as a break, identifying novelty with the loss

of any previous point of reference. In contrast, critics of computer-based arts have constantly asserted that the use of digital tools on the whole results in imitation of previous art forms, so that the 'new' of new media is mainly achieved through re-entering, reworking and assimilating elements and aesthetic concepts originally developed in previous media arts, notably painting, photography and film. Where such aesthetic strategies are adapted to computer-based arts, the characteristics of digital processing imply changes to access, connection and manipulation through calculation. Consequently, where digital techniques are regarded in relation to their specific use in repeating, reduplicating or 'reproducing' previously conceived aesthetic strategies, the old is simulated as the new through the basic categories of digitization, especially manipulation.

With regard to the inconsistent discourse about 'old' and 'new' media, it may be helpful to remember that leading critics in cultural and comparative studies, in art history and cinema studies, have often pointed out that we should be aware of a dialectical process of old and new when we want to evaluate the acceleration of technologies in the nineteenth and twentieth centuries. Assuming that media transformation should be discussed against the background of the cultural, technical and aesthetic constraints which shape and prestructure the emergence of the new in the arts, we need to discuss the specific ways in which computer-based arts transform previous arts practices in the light of the dialectics inherent in all concepts of change. When applied to the relationship between film and digital media, the concept of change promotes examination of the form and function of the digital image in terms of transformation and restructuring. I will propose a comparative approach focusing on the structure of interrelation between the old and the new, on the dialectic between continuities and discontinuities.

Therefore, this essay instigates a formal and structural analysis of moving images in order to discuss the shift from analogue to digital at the level of visibility. I am interested in describing the ways in which the interrelationship between 'traditional' media (such as painting, photography and film) and 'new' media (such as computers and other hypermedia) is made visible in the form and function of the image in recent media arts. I will discuss in particular those points of convergence between different media where the visibility of formal concepts of the image is the prime concern, so that we may compare structurally the form and function of temporal and spatial features as they shift when dealt with in another medium.

So firstly we have to determine which image features become visible as expressions of underlying representational concepts of the image (the aesthetic dimension) and thereby reflect on the material/apparatus basis (the technical dimension) of the specific medium made visible in the individual artwork in the process of production. Secondly, we have to define the level of comparison

appropriate to the convergence of those image concepts, developed in a specific medium (such as the concept of interval developed in photography and film) and therefore reliant on a distinct technical basis, which are transformed when they act as structural expressions of another medium: one interesting question will be how the form and function of the interval can be maintained in digital imaging. The first concern, then, is with the form of the image, the second with the different functions of the form.

I propose two related concepts for analysis of aesthetic strategies in imaging: firstly, *the modes of self-reflection* that make the structural components of media images visible; secondly, *the forms of interrelation* and related devices of intermedia, hypermedia and other forms of mixed-media images, in which the different functions of similar forms of the image are rendered. For example, in film and computer, structural components of the 'coherent' image created by composites or layers occur in both media. Viewed together, self-reflexivity refers us to those majors tools of interrelation that may be used to make visible the structural forms characteristic of new media images, so that the shape of the digital image may be seen against the background of aesthetic strategies conceived in previous media arts.

On the question of which aesthetic strategies expand film into digital media, I want to stress these two points of reference, self-reflection and interrelationship. In order to determine the 'point of convergence' that will allow structural comparison of the concepts of the image in film and computer at the level of form, I will introduce the video medium because, as I will argue, it is video in particular where aesthetic strategies of film interrelate with electronic image processing, leading to features carried out in other, more precisely non-cinematic media arts, such as digital and hypermedia. At this point I consider it useful to point to fundamental differences in the aesthetic functions of the image according to their technical basis.

As Couchot has pointed out, the electronic (televisual, video) image and the cinematographic rely on the same principle of analogue registration, the automatic registration of light rays onto an image surface, whereas the digital image (*l'image simulée*) relies on calculation processes.[1] But in comparing the different media according to the structural differences of their apparatuses, Couchot distinguishes between, on the one hand, the cinematographic image that opens as a window onto the world, and, on the other, the electronic screen that integrates the outer world into an inner space. The electronic image designed to implode into the space of the spectator does not express temporal and spatial dimensions, as is the case with the cinematographic image. Rather, dimensions merge and diffuse at the site of viewing to produce effects of layering and density, inserting (Couchot's term is *effet d'incrustation*) the spatial dimension, through transmission, into the surface of the electronic

1 Edmond Couchot, 'La mosaique ordonée ou l'écran saisi par le calcul', *Communications*, no. 48 (1988), special issue on video, pp. 79–87.

image. In contrast to film, the electronic image, lacking the transition boundary of a frame, has no out-of-field (*hors-champ*), producing this effect through its insertion in which the interrelations between inner space and outer space of cinema projection are reversed. In contrast, the numeric image, because it does not rely on the same recording principle as the cinematographic and electronic image, strictly speaking cannot be considered in directional terms at all. The digital or numeric image cannot then deploy insertion, the *effet d'incrustation*, so that the question of essential characteristics does not apply in terms of directional qualities.

In comparing these different types of media images, Couchot reserves the qualities of representation (including the features of time and space) as characteristics of the cinematographic image, whereas the digital image has no representational function, but as non-directional simulation image (*image simulée*) assimilates representational features to create hypermedia. In between the two, the electronic image is considered omni-directional, mainly characterized through the image effect of insertion that produces simultaneity (implosion) – and thereby density. This omni-directional characteristic is clear in the paradoxical structure of the still video image, where the figurative movement that is normally represented in moving images 'implodes' at the place of the unique, single image unit, so that temporal continuity collapses into the density of layered frames. What happens is that the difference between images, the temporal dimension, is effaced through the clustering of layers, thereby producing density as spatial category.

On this basis the electronic image can be considered in terms of its intermediary position between film and digital images, where the representational functions of the analogue are crossed with the digital effects of simulation. Thus the specific devices of simultaneity and density in video which are associated with the spatial dimension demonstrate a tendency towards a different ordering of visible elements from that of spatial representation in cinema. Certain techniques in video art demonstrate strikingly the crucial features indicating a shift from analogue concepts of the organization of the image to concepts of imaging effected through simulation and mainly occurring on the basis of the computer-processable images. In particular, the electronically-supported simultaneity of different layers in a single image unit can be considered to indicate a shift, expanding the cinematic form of the moving images into forms of organization of the image that are essentially the concern of digital media. The crucial difference concerns the shift from temporal to spatial forms of the image. Restricting inquiries to the level of the shaping of images, my prime concern is with the linear ordering and temporal features of time-based arts, such as cinema, in comparison to the simultaneous organization principles of image elements that do not 'represent' space in terms of cinema, but instead create effects of

density. This also has implications for the way that the electronic image, through insertion or implosion, not only produces spatial effects through layers, but deals with the interval in a way that confirms the cinematic interval – negatively. Both the simultaneity of layers and the reworking of the interval can be regarded as crucial categories in computer-based convergence of media. Electronic imaging occupies an intermediate position in the shift from a preference for temporal features in cinematic imaging (including the representation of space) to a preference for simultaneity and density, resulting in the spatial features of digital imaging. These are in particular visible in aesthetic strategies where image processing is directly addressed, such as the concept of 'digital space' in works by Steina and Woody Vasulka.[2]

II

The space–time axes of representation, figuration and pictorial forms in film have then changed fundamentally through their convergence with digital processing. The new technical (apparatus) basis produces in particular the visible shift from succession to simultaneity, that is to say from features expressing temporalization to those expressing spatialization. To avoid any misinterpretation, I would like to emphasize that the shift from temporalization to spatialization in the organization of visual elements is here conceived in visual clusters (as a form of density) and mainly expressed through multiple layers and should be valued in aesthetic terms. My argument should not be mistaken for a statement of a change of paradigm. I do not follow Jameson's proposal of a 'spatial turn', in the sense of 'spatialization' as defining the 'new cultural dominant' of postmodernism.[3] On the contrary, I want to relate this account of changes in the space–time axis to the intertextual notion of the dominant defined in Russian Formalist theory, where the dominant is the essential formal structuring principle which organizes the interrelation of elements.[4] I will therefore refer to the tendency towards spatialization as a shifting dominant in formalist terms, because I want to underline that I am talking exclusively about changes in the system of arts and media, and do not consider the wider cultural dimension. Furthermore, as Hansen-Löve has convincingly demonstrated in his studies on Russian Formalism, and in particular on the shift from intertextuality to intermediality in Russian modernism, a formal concept allows us to deal with the coexistence of opposing principles, one being dominant and another peripheral.[5] The dialectical notion inherent in the formal concept of shift can also be applied to recent media theory to demonstrate that the development of media can be better understood through the category of interrelation, encompassing correlation and

2 David Dunn and Woody Vasulka, 'Digitaler Raum: ein Forschungsvorschlag/Digital space: a research proposal', in *Virtuelle Welten, Ars Electronica* (Linz: Ars Electronica, 1990), pp. 268–75.

3 Fredric Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism* (London: Verso, 1991).

4 See Yuri Tynjanov, 'On literary evolution', in M. Matejka and K. Posmorska (eds), *Readings in Russian Poetics* (Cambridge, MA: MIT Press, 1971), pp. 66-78.

5 Aage A. Hansen-Löve, 'Intermedialität und Intertextualität. Probleme der Korrelation von Wort- und Bildkunst – am Beispiel der russischen Moderne', in W. Schmid and W-D. Stempel (eds), *Dialog der Texte*, Wiener Slawistischer Almanach, vol. 11 (Wien: 1983), pp. 291–360.

transformation, rather than by using models of accumulation and redemption.

Historically, the concepts of intertextuality and intermediality relate particularly to the convergence of word and image. Hansen-Löve exposes the differences between intertextuality and intermediality by saying that the intertextual device indicates a shift within a single art form, whereas intermediality means the relation between two different types of different art forms. An intermedial correlation is achieved when 'within one and the same artefact, simultaneously and oscillating, both verbal and iconic signs are present, so that the specific pragmatic context is the only way to decide whether it is a "text-image" . . . or an "image-text" '.[6] Whereas intertextuality addresses a text–text relationship (and has been applied in the film debate to describe a type of film–film relationship, especially in genre film),[7] intermediality refers to a type of relationship that relies on the correlation of elements within the entire system of art forms that form the cultural frame of reference. This frame of reference, characteristically both diachronic and synchronic, provides the context for the processes of transformation. What then becomes visible through modes of self-reflection, or more precisely self-referentiality, as Hansen-Löve concludes, is the form of correlation between different media elements. More important still, with regard to the interrelation between film and computer, is the fact that the surveillance of the intermedial correlation of word and image produces an effect of spatialization.

According to Hansen-Löve, the intermedial correlation of word and image results in a transformation in the function of the dominant that effects its structural form. The simultaneous presence of word and image in the intermedia poem ('word-image', 'image-word') expresses a shifting dominant from linear ordering, regarded as a principle of temporalization, to simultaneous ordering, seen as a principle of spatialization. The simultaneity expressed in the density of textual elements within the textual space (of the 'word-image' poem) is achieved through the convergence of word and image into a new form, demonstrating intermediality as a tendency to spatialization. Hansen-Löve's definition of this shifting dominant can be applied to describe similar forms of interrelation between film and computer, forms that result in density, simply because the underlying model of intermedial transformation described allows for the comparison of the structural components that are interrelated and transformed to produce new forms of the image.

Where Hansen-Löve distinguishes intertextual and intermedial relationships on the grounds of the shifting function of the dominant, we may expand neoformalist film analysis on the same principle of development.[8] In particular in the light of Hansen-Löve's analysis, Tynjanov's characteristically intertextual definition of function can be reinforced in the convergence of formalism, formalist film theory and

6 Ibid., p. 325.

7 David Bordwell, Narration in the Fiction Film (London: Methuen, 1985), p. 36.

8 Kristin Thompson, Breaking the Glass Armor: Neoformalist Film Analysis (Princeton, NJ: Princeton University Press, 1988).

media analysis. Not only are formal concepts as such preferable in a comparative approach to new media when we need to consider the diversity of phenomena whose features have evolved simultaneously in diachronic and synchronic directions, but by questioning the function of similar organizational principles of different media forms we may contribute a historical framework capable of discussing shifts instead of breaks. The concept of function is not limited to determining the interrelationship of different elements with each other, but also applies to different media in the system of arts, a dynamic model that, according to Hansen-Löve, cannot only be applied to the intermedial relationship, but is expandable to further forms of convergence, such as digital or hypermedia. Finally, function is a category primarily expressing the concept of shift, not coherence. In this regard we may say that when specific devices (such as the interval) are used in similar ways in different media but expressed differently, so that the shape of the image changes, the different function of the device may reveal a difference in the media form.

I will in the first place focus on the shifting dominant in the image function of the interval, because the interval 'shapes' specific representational forms of temporalization and spatialization, the media-specific forms of the cinematic image, but is reworked in electronic media. In such reworking, as in the historical example of intermediality, older forms are visibly contrasted with other forms, such as clusters, in such a way that a new form of the electronic image emerges whose function is to present a difference between media which renders visible the transformation of temporal features into digital space. Here again, the structure of the electronic image confronted with digital tools will be considered the major point of convergence, because, according to Couchot's technical distinction, video holds the intermediary position between the registration and simulation image types.

III

The technical distinction of analogue and digital rests on a dispositional framework grounded in fundamental characteristics that prestructure certain forms of media images. In the case of cinema, certain organizational principles of the image, such as the interval, are constitutive of linear ordering of the images, since the interval prestructures continuous film form. Material aspects are not the only criteria for differentiation between types of images based on different technical production processes, such as recording or calculation. However, as the example of interval and cluster may demonstrate, I am interested in aesthetic forms that have not only developed on the grounds of technical requirements, but also, against the background

9 Jacques Aumont, L'Oeil
interminable (Paris: Séguier,
1989); 'The variable eye, or the
mobilization of the gaze', in
Dudley Andrew (ed.), The Image
in Dispute: Art and Cinema in the
Age of Photography (Austin, TX:
University of Texas Press, 1997),
pp. 231–258.

of the material basis, in the attempt to expand or transform prestructured concepts of the image. For example, taken together, the apparatus and the inherent function of the interval as the gap between two images prestructure the gradual organization of images to form the principle of succession and temporal organization essentially, but not exclusively, associated with moving images of the type of film.

It is interesting to note that Jacques Aumont, in his comparative analysis of painting, photography and film, has clearly demonstrated that the concept of interval expresses media-specific functions of the 'variable eye'.[9] Viewed together, these functions of the 'variable eye' that have emerged in historically distinct modes in painting, photography and film come together on the basis of the interval as the basic form of the temporalization of the image. The interval, then, is the overriding category for discussions of the interrelation between historically different media. Despite the medium-specific functions of the interval in representations of the temporal shift, media interrelate on the level of the form of the image. If, as Aumont argues in his discussion of the temporal functions of images based on different analogue registration processes, the interval defines the level, we may add that spatialization in digital media implies redefinition of the level and the determination of another concept appropriate to 'preshaping' spatial forms. How then can the spatial concept transform or relate to the temporal as represented by the interval.

Aumont suggests that all forms of painting (including those realized with photography) create out of the interval a type of image that can be identified as film or filmic. This function of the filmic interval will be transformed in electronic processing. The way in which simulation manipulates the filmic process effaces the gap, and with it a specific temporal feature of the cinematic image. However, on the level of representation, the filmic, interval-based type of image can be maintained, reinforced or contrasted in simulation. The interval may be figuratively modelled to serve as 'compositional motivation' with regard to the manifestation of film style in narrative cinema; it may be structurally decomposed in experimental film that self-reflexively lays bare cinema's mechanisms in terms of material aspects and apparatus's function. But the function of the interval as the key structural element in cinema's series of shots, simultaneously stressing temporal difference and mediating continuity between juxtaposed elements, is transformed when film images are manipulated with electronic tools and computer technology. What happens is that the temporal function of the interval is transferred into a spatial category where the differences between single images are represented simultaneously through the use of (multiple) layers.

Paech, in his comparative study on film and video images, has pointed out that the *entre-images* in video replace or efface the

10 Joachim Paech. 'Das Bild zwischen den Bildern', in *Film, Fernsehen, Video und die Künste: Strategien der Intermedialität* (Stuttgart and Weimar: Metzler, 1994), pp. 163–178.

11 Raymond Bellour, *L'Entre-Images: Photo, Cinéma, Vidéo* (Paris: La Différence, 1990), p. 12.

12 Paech, pp. 168ff.

13 Henry Cowell, *New Musical Resources* (New York: Knopf, 1930).

14 Hans Vogt, *Neue Musik Seit 1945* (Stuttgart: Reclam, 1972).

interval of film.[10] The term *entre-images* derives from Raymond Bellour's characterization of the paradox of the video, 'between the mobile and the immobile, between the photographic analogy and what has transformed it'.[11] This characterization was subsequently taken up by Paech to differentiate the function of interval in film and video. Where the interval in film mediates in temporal form the spatial gap separating adjacent images, and merges this difference with the movement of projection to produce the actual moving image on the screen, the gap that constitutes and endangers the cinematic moving image is eliminated in the electronic screen image, simply because cathode ray line-processing and digital encoding do not transmit 'images'. However, the paradoxical articulation of *l'entre-images* has another function in video when the characteristics of temporal representation of spatial distance in the interval are restructured into forms of the image that spatially represent temporal distance through different layers of images merged with each other in the same image unit. The new shape of the image, transforming the cinematically conceived figuration of the 'image between the images'[12] into spatial density, I will call a cluster.

The term 'cluster' is borrowed from music theory to describe the technical device of layering I consider specific to those media images that are constituted not through interval, but processing. Henry Cowell in 1930 defined clusters as a phenomenon apparent in modern music and determined by chord formation, in which the tones together produce sound effects and fusion so that the single tones can no longer be identified.[13] Transferred to media, in particular visual media, the term cluster means the simultaneity of different images or elements of images effected through multiple layers. The cluster results in spatial density or fusion. For a definition of the difference between, on the one hand, successive and linear, and, on the other, simultaneous and spatial devices of the organization of images, we may refer to the structure of musical clusters, where the fusion of sounds results in punctual compression indicating a tendency to spatialization. More precisely, musical clusters indicate spatialization in so far as they manage increasingly indifferent intervals.[14] In this context visual clusters can be defined as the process of layering elements into a dense, 'spatial' image, effecting overlappings and punctual fusions comparable to punctual compression in musical clusters. Where the interval in film maps the difference between two moving images, and according to Paech mediates temporal difference and spatial distance, on the contrary, the cluster results from spatial density, where the relay function of the interval is captured in punctual compression. The aspect of density can also be compared with Couchot's characterization of the non-directionality and temporal–spatial implosion of the electronic image. From the perspective of the simultaneity and density essential to the electronic image, the cluster may be considered as

15 Gilles Deleuze, *Cinema 2: the Time-Image* (Minneapolis, MN: University of Minnesota Press, 1995).

'preshaping' the aesthetic expression of implosion and punctual compression in electronic imaging.

Certainly, the cluster does not refer solely to electronic media forms. The function of clusters in the simultaneous representation of different aspects of time can be traced in the history of painting, collage and cinematic use of optical printing, split-screen framing and matte techniques. The point is that as a characteristically electronic form, the cluster as transformation process may not only distinguish film from video, but may also be present in the similarities between video and computer. Although the density of the cluster represents in visual form the non-directional features of an image that nevertheless relies on registration, with the digital imaging it takes on the function of representing what is effaced, since according to Couchot and later confirmed by Deleuze,[15] the numeric image lacks directional features and, in contrast to video, the simulation image does not represent.

The paradoxical form of the video image that effaces the cinematic 'image between the image' described by Paech, may nevertheless support specific functions of the directional image. Temporal and spatial features are important in the electronic image, in particular where they function to represent media difference. In other words, the temporal structure of the interval paradoxically becomes visible at the point where the interval structure of film is electronically reshaped to show the effect of effacing it. In relation to the digital, where multiple layers in video are assembled to build visual clusters that produce a coherent, seamless image, the electronic image represents characteristics which are presented in processable images. In other words, the electronic image, most evidently the self-reflection of the electronic image in media arts, may constitute a starting point to describe the transfer of devices that preshape differentially the visibility of certain functions of the analogue and the digital that constitute, respectively, the interval and the cluster. Thus, not only Aumont's interval but also the cluster have relay functions in the formal expression of the shape of media images.

IV

Comparison of interval and cluster image types, as they are shaped through underlying techniques, defines the level of comparison for discussion of the shifting dominant between analogue and digital media. What is not yet clear is the effect that the organization of contrasting functions of the image has on the structure of the media form. The crucial point is to differentiate not only between form and function – as formalism and neoformalism suggest – but also to distinguish between media and form, because we have to acknowledge that media are not forms. In this regard we may draw

16 Niklas Luhmann, *Die Wissenschaft der Gesellschaft* (Frankfurt/Main: Suhrkamp, 1994).

17 Ibid., p. 183.

18 Ibid., p. 176.

19 Ibid., p. 172.

on systems theory, in particular Luhmann's major distinction of form as the interrelationship of loose and solid couplings.[16] Coupling and differentiation Luhmann considers equally prerequisite in conceptualizing the media.

According to Luhmann, debating the media demands a basic distinction between media and form, where the difference itself is to be considered form: consequently, a representational category. The structural difference of medium and form is clear, says Luhmann, in the paradox of self-referentiality common to all communication media. In self-referentiality, the medium firstly produces the forms that will be asserted (become dominant) in the medium itself: 'Crucial for the conceptual determination therefore is the difference between medium and form in the sense of weakness and strength, of loose and solid couplings, and the resulting assumption of an asymmetry: the more rigid form asserts against the smoother medium'.[17] The concept of form can be deduced from the coupling of the elements. This means that 'a form ... can be used as medium for further conception of form',[18] but also implies that elements 'for their part are always forms in another medium'.[19] In considering art as medium, Luhmann's theoretical standpoint here implies a highly differentiated concept of functional interrelations that can be linked to the discussion of the shifting dominant.

Luhmann suggests a term of difference that is structurally comparable to the transformation category, since both Tynjanov's notion of 'dynamic form' and Hansen-Löve's emphasis on the differential notion in the function of the dominant converge with Luhmann's concept of difference: the latter prominently encompasses the twofold nature of shift, namely continuity and discontinuity. The distinction between loose and solid links also resembles the exchange of central and peripheral in the shifting dominant. The structure of correlation in particular is regarded as ambivalent and subject to change as the components structuring the relationship between loose and rigid elements in the medium may be seen shifting. To understand how the two features, interval and cluster, now stand respectively for the temporal and spatial organizational principles of the image, and how this function is maintained, we have to question the parameters of media specificity as they manifest in the form.

Referring to Luhmann, Paech points out that in media aesthetics, two forms have to be distinguished that express the difference between medium and form. The first applies to intermediality where, based on structural correspondence of the media forms such as photography and film, it is likely that the interrelationship between the two has itself become the form of their medium. This form would in particular emerge in the interval, and can be seen especially in the 'photographic film' (for example Chris Marker's *La Jetée* [1964]). The second form is constituted by the solid couplings that nevertheless produce constitutive difference on the level of

representation, resulting in figurations that make the ambivalent structure of loose and rigid elements in the image visible. This ambivalent or differential structure of the second form is particularly appropriate to the simultaneity of layers and interval in the electronic image that, because of the very visibility of its paradoxical structure, is capable of representing the shift from temporal to spatial features effected through effacing the gap and producing punctual density. Again, the constitutive difference between form and media, and between different forms, is recognizable where the difference is mediated, especially through the modes of self-referentiality. To conclude: the concept of difference is bound to the level of representation.

It is now possible to traverse the duality of 'old' and 'new', and introduce the discourse of the dominant in a re-dimensionalized way so that we may address the level of media comparison in the context of the convergence of temporal and spatial features as they become visible in the aesthetic strategies of interrelating loose and solid elements. To compare film, video and computer, the next step will be to define their common concepts of the image: concepts that are shaped differently by the different technical bases of each medium. This comparison must also address firstly the material basis or technical distinction, and secondly the specific types of interrelationship – such as intertextuality, intermediality and hypermedia – and the fact that the structure may change when other media are interrelated.

V

Media theories describe the representational functions of film and photography as qualities inherent to the mechanics of their fabrication, crucially distinguishable from 'the digitally encoded, computer-processable image as simply a new nonchemical form of photography or as single-frame video'.[20] The identification of the essential characteristic of the digital, namely that, as Mitchell has pointed out, it 'can be manipulated easily', helps to explain the generally confirmed argument that the digital image 'blurs the customary distinctions between painting and photography and between mechanical and handmade pictures'.[21] However, the technical distinction does not lead any further in comparative discussion of the media unless we draw not only the logical and cultural consequences, as Mitchell suggests, but also evaluate the aesthetic implications. Where Mitchell says, 'intermediate processing of images plays a central role' in digital arts it can be added, with a nod to Couchot, that the distinction between representation and presentation is crucial. As Couchot argues, the electronic image – like the cinematic – is an effect of representation, meaning that it

20 William J. Mitchell, *The Reconfigured Eye: Visual Truth in the Post-Photographic Era* (Cambridge: Cambridge University Press, 1992), p. 3.

21 Ibid., p. 6.

represents the parameters of time and space. The simulation, on the other hand – specifically the numeric image – is a form of presentation, since the formal difference is grounded in its 'omni-directional' features. So in contrast to representation as an effect of analogue registration, the simulation is an effect of the digital in the sense that the image may equally present what is and what is not.

For Deleuze, explicitly referring to Couchot, in the case of 'the electronic image, that is, the tele and video image, the numerical image', 'the organization of space here loses its privileged directions, and first of all the privilege of the vertical which the position of the screen still displays, in favour of an omni-directional space which constantly varies its angles and co-ordinates, to exchange the vertical and the horizontal'.[22] Consequently, in Couchot's differentiation between the electronic and the numeric, what precisely is at stake in the digitally processed image is that it does not represent parameters of time and/or space, but presents non-directional forms. These are effected by simulation and, as we will see, are fundamentally ambivalent. Furthermore, since non-directionality implies density and punctual compression, a question arises as to how the digital may present (not represent) forms of spatialization. Beforehand it may be helpful to outline the omni-directional structure of hypermedia with regard to components 'preshaping' the spatial concept in the digital: in short, the 'digital space'.

The technical implications for new types of production in digital media are described by Coy: 'all written, optical, and electric media with the use of microelectronics and computer techniques finally will merge into one universal digital medium', that is hypermedia.[23] Hypermedia, the term introduced by Ted Nelson[24] to describe media which perform 'multidimensional ways' of branching, signifies a multidimensional structure and an ability to move in a non-linear way through information. The point is to access different media; the essential distinction between media in intermedia is no longer at issue in hypermedia. The networking and non-sequential structure of hypermedia indicates an option to connect each single digital media to another one. With regard to the domain of the digital, the computer is only a building block for creating new hypermedia, argues Coy.

Consequently, in digital media such as hypermedia that are based on non-sequential structure, the media form of the image cannot be described sufficiently in terms of transformation and representation, requiring instead terms of ambivalence and simulation. Contrasting representational and non-representational media, Lachmann[25] characterizes a twofold type of simulation image that extinguishes the representational function and instead gives an 'ambivalence of simultaneity of the same and the other, of representation and negation of this function, of affirmation and negation'. This deals

22 Deleuze, *Cinema 2*, p. 265.

23 Wolfgang Coy, 'Die Turing-Galaxis – Computer als Medien', in K.P. Dencker (ed.), *Weltbilder. Bildwelten. Interface 2* (Hamburg: Hans-Bredow-Institut, 1995), pp. 48–53
24 Theodor H. Nelson, 'Hypermedia', in *Computer Lib/Dream Machines* (Redmond, WA: Microsoft, 1987), pp. 64–5.

25 Renate Lachmann, *Gedächtnis und Literatur: Intertextualität in der Russischen Moderne* (Frankfurt/Main: Suhrkamp, 1990).

26 Ibid., p. 31.

27 Friedrich Kittler, 'Fiktion und
Simulation' , in Ars Electronica
(ed.), *Philosophien der neuen
Technologie* (Berlin: Merve,
1989), p. 61.

with the 'pretence (simulation) of false semantic facts: that is, a simulation which at the same time is shifting (dissimulation)'.[26]

For Kittler the structure of the digital indicates an option to perform simulation in both ways, affirmatively and negatively. Kittler reserves the term 'simulation' to characterize a digital tool that allows for negation and is contrasted to the affirmative tool in analogue media. Only with the emergence of the digital is it possible to manipulate negation, says Kittler: 'The affirmative means that we affirm what is and negate what is not, whereas simulation means to affirm what is not and negate what is',[27] so that on the basis of algorithms all connections can be made possible through negation. With regard to digital aesthetics we must acknowledge the simulation of exactly those forms of interrelation that have been described here as basic features developed in analogue media arts, such as film and video, to represent time and space, namely interval and cluster.

Thus, simulation will be the level where the shift in the digital becomes visible: a shift which will indicate or, according to the dialogical concept of simulation, encompass the shift from analogue to digital form. It is made visible through the comparison of the two opposing features, affirmation and simulation, within a paradoxical form. Comparable to the paradoxical form of the video image that reveals the difference between them, since digital simulation is able to perform in both ways, wherein lies the constitutive difference that may reveal the difference between analogue and digital, the digital shift will also express difference in a paradoxical form that is conceived through an image effect that expresses the 'preshaping' structure of density, and more precisely of spatiality. The most striking technique to perform this particular difference is the morph.

Through morphing, the dialectical interrelation of continuities and discontinuities between analogue and digital is no longer represented through transformational processes (visible in interval and cluster). Instead the complexity of simulation differentiates inherently between manipulation and representation, the latter building the analogue 'background' against which the digital simulation operates, so that the structural ambivalence of simulation is completely encompassed in the digital, eventually through morph. The morph is a crucial technique of simulation since parts of the image may be transformed in both ways, back and forth, so that two different moments in time hit each other in a single image unit, creating a paradoxical image position. This can be achieved through simulation because the affirmative also implies the presentation of the negative, of what is not. The simulated moving image negates the representation of a 'real' moving image through the affirmative presentation of 'digital space'. The morph not only indicates the shift from analogue to digital in the ambivalence performed by simulation, but also reflects the conceptual ambivalence of the numerical structure that, vice versa, is visibly 'shaping' the image form, so that 'what is' and

'what is not', the affirmative and the negative component, are bound dialectically. In order to relate this media-specific organization of image in the digital to other forms in media, we may refer to Luhmann's suggestion and consider the digital morph as ambivalent figuration, as equal presentation of loose and solid couplings. Thus we could say that the difference is permanently and simultaneously reinforced and effaced. It is this permeating form that constitutes visibility in the digital medium. Furthermore, the complexity of the image structure achieved through morphing, where duration is presented both forwards and backwards, clearly indicates the density resulting from calculation so that we may also conclude that form in the digital 'simulates' spatial density.

VI

Differentiation of cinema and computer-based media, such as hypermedia, must address conceptual shifts that result from the creative use of new technologies. The question at stake is how we may value the conceivable visual consequences of a technical distinction in the arts that abandons the constraints of cinema, resulting in forms that expand space. As Dunn and Vasulka describe the matter:

> This conflict has not only been initiated by our interest in new forms in general, but specifically by the profound implications of organizing our materials through numerical code. What becomes apparent from the structural demands of this technology is that there is an ability, and even an affinity, for discrete genres to interact through the binary code in ways which transcend linear cause and effect relationships, revealing new compositional concepts with regard to space, perspective and morphology.[28]

Their stress is on the reinforced concept of 'digital space' which, in abandoning traditional forms of organization, departs from the use of the computer to 'emulate' or imitate traditional art forms or simply expand their formal organizing principles. What is required is an artistic conceptualization of the parameters of 'digital space' extending beyond art into the larger context of the perceptual environment, where another shift, from computer to hypermedia, is at stake. Dunn and Vasulka conclude their proposal thus: 'What becomes evident is that a kind of digital synaesthesia could emerge from this perceptual environment which can provide an experience of the concept of non-linear complexity which has become so profoundly significant to the sciences at large'.[29]

28 Dunn and Vasulka, 'Digitaler Raum', p. 270.

29 Ibid., p. 272.

The effect of multiform narrative on subjectivity

ALISON McMAHAN

Multiform narrative structures in computer games (especially on-line multiplayer games) and on-line group activities like multi-user domains (MUDs), object-oriented MUDs (MOOs) and even chat rooms, have led to new modes of subjectivity for characters and spectators alike. In traditional psychoanalytic film theory, spectator identification has been defined as primary (spectator identifies with the camera) or secondary (identification with a character). Interactive fiction has led the spectator to a situation where multiple identifications are operating at once. In addition, the diegetic world of the narrative is infiltrated or engaged by the non-diegetic, requiring different types of spectator response simultaneously. Yet a precise analysis of these new modes of subjectivity has yet to be carried out.[1]

The aim of this article is to examine multiform subjectivity, not in computer games, but in Hollywood films. Often produced by the same companies that produce interactive media, these films have already absorbed the lessons of multiform subjectivity in interactive media and have applied it to the more linear cinema.

Since it is necessary to understand multiform plot to understand multiform subjectivity, I will begin by explaining the workings of one of the most common multiform plots used in science-fiction films: the parallel plot structure.[2] I will then show how this plot structure affects character and spectator subjectivity.

1 This analysis will be included in my forthcoming book, *Branching Characters, Branching Plots: a Narratology of Interactive Media*, to be published as part of the Film Culture in Transition Series by Amsterdam University Press.

2 For an explanation of other multiform structures, see Brian Sawyer and John Vourlis, 'Screenwriting structures for new media', *Creative Screenwriting*, vol. 2, no. 2 (1995), pp. 95–102.

Linear versus multiform narrative

Numerous recent Hollywood films have incorporated both multiform narrative and multiform subjectivity into their linear structure, with some of the same results as those achieved by interactive narratives. A typical linear narrative connects causally-related characters and situations in a three-act structure to a single resolution. Films with a linear structure are meant to be viewed from beginning to end without branching or changing. The spectator goes through a complex series of mental processes as she watches the film, but she is not kinesthetically involved in making choices that affect the action or the outcome. Multiform plots, although usually event-driven, are non-linear, and when delivered by an interactive viewing system, such as a CD-ROM game, require a physical response from spectators.

The three basic multiform plots are: linear structure with scene branching (also called the 'cul-de-sac' plot); the hierarchical branching explosion plot; the parallel plot structure.[3] Sawyer and Vourlis define interactive parallel plot structure as 'several essentially "straight line" conventional stories', in which 'at various points in the story, the viewer can choose to hop to the same point in a different rendition of the same story'.[4] Parallel plots can be separated spatially, as they are in the parallel universes of the television series *Sliders* (Robert K. Weiss and Tracey Torme, 1995–9), or temporally, as in the parallel universes of a time-travel story. Time travel is an often-used device that enables a character to leap from one parallel reality to another. If he accomplishes a certain heroic task he will be able to return to the 'right' reality, that is, to the version of the plot that he prefers.

In a parallel plot structure that is delivered linearly, as in classic time-travel films, the decisions about when to cross from one plot to another are made by the filmmakers. Take *Twelve Monkeys* (Terry Gilliam, 1995) – based on Chris Marker's *La Jetée/The Pier* (1964) – as an example. There are three plots: the diegetic present of the hero, the past he travels to and alters, and the alternative future he either envisions or brings about as a result of his actions.

> The future: Cole (the hero played by Bruce Willis, a prisoner in a dystopic 2010), is given a mission to time travel and find a pure sample of the virus that almost wiped out the human race in 1997.[5]

> The past: his life as a child, the boy who first comes to the airport, who saw the boy-in-the-well episode on television, and who saw his future self shot at the airport. This past is depicted in a fragmented way, through waking and sleeping dreams, and alluded to in dialogue.

3   Ibid., p. 98

4   Ibid.

5   I call this plotline the future because it is the future from the spectator's point of view (at least in the year the movie was released). For Cole, of course, the year 2010 is his diegetic present.

6 The character who defines the 'present' for us is Madeleine Stowe's; just as 2010 is Cole's diegetic present, the 1990s is the psychiatrist's. Since we, the spectators, 'share' the present with her, she is the character who represents our point of view, who allows us access into the world of the film.

7 See Chapter 4 of Slavoj Žižek, 'Cyberspace, or the unbearable closure of being', in The Plague of Fantasies (London and New York: Verso, 1997) pp. 127–70. Žižek cites Meet John Doe (1941) and It's a Wonderful Life (1947) as films with multiple closures.

The present. This 'present' is represented by several time-trips, first trip to 1990, second trip to 1914 (really a tangent that only becomes important when it leads the psychiatrist, played by Madeleine Stowe, to an epiphany in 1996), third trip to 1996, fourth trip to 1997.[6] It is the psychiatrist's logic that determines the flow of events of this plotline: Cole is delusional, and if she can cure him all will be well and there will be no virus.

In an interactive product based on this film, each of these plot lines could have had its own ending; for example, in the alternative future, the psychiatrist could have cured Cole and they could then have written a best-seller together based on his case. A linear delivery form, however, usually requires singular closure.[7] As a result, most Hollywood films with parallel plot structure show all the paths converging in one climax, thus providing the closure required by the linear form. In *Twelve Monkeys*, as in *La Jetée*, all three plots are brought together for one ending in the airport. In a parallel plot structure, one path is usually privileged over the others. The *Star Trek: Next Generation* episode 184, 'Parallels', is an example. In each plot Worf is shown in a different kind of romantic relationship with Troi. The plot that is privileged, of course, is the friendly colleague relationship depicted in the rest of the series. Although the episode privileges one path, we, the spectators, know the other paths are continuing to spin out their own stories; from the limited clues we are given we can automatically fill in the blanks.

Sometimes a film only gives us a glimpse of a parallel plot path, but this glimpse is enough to fill our imaginations. In the opening of the feature film *Star Trek: First Contact* (Jonathan Frakes, 1996), the crew of the Starship Enterprise has to beat the Borg back to a certain moment in the past. There are two possible plots here: the future where the Borg rule the Earth, shown briefly in an early scene, or the future as the Starship Enterprise already knows it, in which humans rule Federation Space. From the brief glimpse of the Borg-controlled planet Earth, we know the whole history of that parallel universe. This is possible because event-driven multiform plots are basically several linear plots loosely knitted together; each separate strand still follows the classic rules of causal transformation. The transformation from a linear delivery method to an interactive one does not necessarily entail a transformation in narrative form.

Narration in multiform plot structures

There are some common misconceptions about the interactive side of interactive narrative. To some critics interactivity means that we are getting rid of the narrator, of point of view, and the author's ability to make a thematic statement, because the spectator is now no longer

8 Walter Parkes, 'Random access, remote control: the evolution of storytelling', *Omni Magazine* (January 1994). The article defines what Parkes called 'the four C's of storytelling', character, context, closure and community, and then argues that these 'four C's cannot be realized in a multiform plot with interactive delivery'.

9 Thomas Elsaesser, *Cinema Futures: Cain, Abel or Cable? The Screen Arts in the Digital Age* (Amsterdam: Amsterdam University Press, 1998).

10 Marie-Laure Ryan, 'Narrator', in Irena R. Makaryk (ed.), *Encyclopedia of Contemporary Literary Theory: Approaches, Scholars, Terms* (Toronto: University of Toronto Press, 1994), p. 601.

11 Ibid., p. 598.

12 Ibid., pp. 598–9.

13 Henry Jenkins, 'Star Trek rerun, reread, rewritten: fan writing as textual poaching', *Camera Obscura*, no. 32 (September–January 1993–4), pp. 171–203.

14 Ibid., p. 171.

passive, but is becoming a co-narrator.[8] This is actually a misconception of what interactive narrative has to offer. As Thomas Elsaesser points out in the introduction to *Cinema Futures: Cain, Abel or Cable?*, the skill of the storyteller, whether conventional or interactive, 'lies in the ability to suggest an open future at every point of the narrative, while having, of course, planned or "programmed" the progress and resolution in advance'.[9] But if interactivity does not mean that the spectator – now called the user – can participate in the shaping of the story, what does it mean?

It means, simply, that she has more choices about how to receive it. 'The actual sender – [or author] – is still the *narrator* of the text, located in the actual world and transmits a fiction to another member of the actual world, the reader. The Narrator is part of the textual world and communicates a narrative to another member of the textual world, the so-called Narratee.'[10] The concept of the narratee was first proposed by Gerard Genette as the 'communicative partner of the narrator, filler of the receiver position in the narrative. As is the case with narrators, narratees are actual individuals in nonfictional narratives but textual constructs in fiction.'[11] Here is a more extended definition of the Narratee:

> Narratees may be either individuals or collective entities. Individuated narratees participate in the plot in the same way as do individuated narrators: as uninvolved witness, secondary character or main protagonist . . . When the text is addressed to a collectivity, the narratee is constructed as a set of beliefs presupposed by the text.[12]

Interactive narrative does not allow the spectator to 'take over' the function of narrator. Interactivity enables the narratee, the interactive user, to construct herself. Narratees, or cinematic spectators, are never as passive as they might appear to be on the surface. In his study of *Star Trek* fans, Henry Jenkins discusses one particular Real Life (RL) form of narratee engagement with the *Star Trek* world, that of fan writing. These *Star Trek* fanzines circulate and are added onto by other fans; they represent a process of consumption as 'reclaiming of textual material, "making it one's own, appropriating or re-appropriating it"'.[13] What do these fans write about? Jenkins quotes one of them:

> How does Uhuru feel about her lack of promotion, what does she try to do about it, how would she handle an emergency, or a case of sexual harassment? [sic] What were Chapel's experiences in medical school, what is her job at Starfleet Headquarters, what is her relationship with Sarek and Amanda now?[14]

What these fans are doing is extending the world of the narrative as it has already been presented to them. But they are extending it in a way that reflects their own concerns. The Narrator of *Star Trek*

constructed them as a certain kind of narratee – as male, for example, or heterosexual – and they felt left out of this mode of address, so they are correcting the imbalance by adding to the world in a way that more specifically includes them as a narratee. The *Star Trek* fans that Jenkins studied make videos, publish articles and story trees, and even write songs. What interactive entertainment forms do is harness some of that creative fan energy in ways determined by the narrator, channelling it back into the interactive text. This channelling can be as minimal as choosing which story path to travel first, or building a world in a simulation, like *SimCity*. Whatever the interactive genre, the user's range of choice is limited in some way.

New forms for character and spectator subjectivity

15 Timothy Garrand, 'Scripting narrative for interactive media', *Journal of Film and Video*, vol. 49, nos 1–2 (1997), pp. 66–79.

Timothy Garrand points out that the degree of user control is one of the first issues that the interactive movie writer must decide.[15] Generally, the user is allowed some control over scenes (the user decides which path the story will take, but once a path is chosen he is locked onto it), actions (the player sees the characters in the third person and has some control over when and to whom characters speak, and in which screen direction they move, but no control over what they say), or all behaviour, the highest degree of interactivity available. In this mode the user controls what the character does and says, and the interactivity is done in the first person, allowing the user to assume the role of a character. Many programmes combine these approaches, allowing the user to operate sometimes from a third-person point of view and sometimes a first-person point of view, much like a linear film.

Each approach has its advantages and disadvantages. First-person point of view allows the user to gain maximum immersion, but it is difficult to portray certain types of action, like a kiss or a punch. The spectator/user never gets to see the expressions and actions of the protagonist she embodies. Think of the difficulties encountered in the classical Hollywood film *The Lady in The Lake* (Robert Montgomery, 1946),[16] and how the filmmakers tried to resolve those difficulties with a heavy voiceover track. In the televsion series *Quantum Leap* (Donald Bellisarius, 1990–94), the same difficulties were dealt with by having an introductory speech made by the character who was not leaping, and by having the hero see his reflections in mirrors or windows, which showed him how he looked to the other characters in that world. These solutions were unsatisfactory at best. The lack of reaction shots of the main character has an alienating effect. In these two examples the gender of the protagonist was pre-determined, but in a CD-ROM game, where the gender is left up to the user or not specified, how do the other characters address the player/protagonist? Some games

16 See Andrea Kalas and Rhona J. Berenstein, '"You'll see it just as I saw it": voyeurism, fetishism, and the female spectator in *Lady in the Lake*', *Journal of Film and Video*, vol. 48, no. 3 (1996), pp. 17–29.

overcome this difficulty by determining the character for the user (in third-person interactive narratives, the player usually takes on the role of a sketchily drawn minor character). Some leave the main character very general; and some allow the user some initial choices in determining the character.

An interactive situation where the user has near-unlimited choice would probably look something like the Holodeck on *Star Trek: Next Generation*. The Holodeck user steps into an immersive environment, and can control every aspect of the game, from the degree of strength of the opponent to their appearance, size and personality, and participates fully as a character themselves with full tactility. From a technological point of view such an interactive environment is not possible. However MUDs, in which users interact with each other via assumed characters in a world designed partly by programmer–auteurs and partly by the players themselves, are probably the closest thing we have now to a Holodeck. What effect does such a narrative environment have on character subjectivity and spectator engagement?

In interactive narratives the differentiation between character subjectivity and that of the constructed spectator are blurred. There are at least three modes of multiform subjectivity common to multiform plots, whether they are delivered interactively or linearly: distributed, networked, and agentless.[17]

Distributed subjectivity

In a MUD, users can design multiple characters to represent different aspects of themselves, ending up in what Sherry Turkle[18] has called distributed subjectivity: one subject is distributed over multiple characters. In some CD-ROM games the user can define certain aspects of the characters. When the game is played again the same characters can be defined in a different way to produce a different game – as in the movie *Rashomon* (Akira Kurosawa, 1950), in which each version of the murder shows the characters as slightly different, with different degrees of guilt and innocence.

This concept is not so different from the classic screenwriting concept of doubling. The first films that showed characters with distributed subjectivity were the Jekyll and Hyde films, in which the subject or self is split into two: the 'good' conscious and the 'evil' subconscious. The key Hollywood technique is to make main characters into opposing versions of the same thing. In the film *Face/Off* (John Woo, 1997) that principle has been carried to an extreme, with its story of a hero and his opponent who trade faces. An evolutionary paradigm for character development, as compared to the binary one favoured by this type of film, would eschew black and white for shades of grey. The Ancient Greeks and Romans had

17 The growing presence of artificial intelligence (AI) forms indicates further possibilities. See Stephen Levy, *Artificial Life: the Quest for a New Creation* (London: Penguin, 1993).

18 Sherry Turkle, *Life on the Screen: Identity in the Age of the Internet* (London: Phoenix, 1997).

such a paradigm in their pantheons: each god had a specific function for a specific class of person at a specific point in their life development, whether it was Aries, the god of war, or Athena, the goddess of female intellectuals. It is not easy to apply an evolutionary model to character development in linear media, but it has been done in recent science-fiction films, as the following examples show.

In *Total Recall* (Paul Verhoeven, 1990), Arnold Schwarzenegger's character is originally a simple construction worker who plans to take a 'mental vacation' by having one programmed in. In the middle of the programming session — before the programme has been installed in his brain – the doctors administering the vacation discover that he already has a second submerged personality, one which matches quite closely his fantasy 'vacation' in which he is a spy, a resistance fighter from Mars, and there is a dark-haired woman that he cannot seem to remember and yet cannot seem to forget. In fact, this submerged personality is his *real* personality, and the one we met first, the simple worker married to Sharon Stone, is a programmed personality. Later on he discovers that he has a *third* personality. If his first personality was rather amorphous and confused, his second that of a resistance fighter who is passionately faithful to one woman, his third is Himmler to a genocidal dictator who wants to eliminate all the mutants – the remains of the original human colonizers of the planet. Since *Total Recall* is an action/adventure story, the three choices represent three political viewpoints.

In *Multiplicity* (Harold Ramis, 1996), a comedy with an emphasis on the love story, Michael Keaton plays a beleaguered husband, father and construction project manager. His employers want him to do double overtime on his job, and his wife wants him to help more with the kids so she can go back to work, but he is having a midlife crisis and wants to go to some football games and learn how to sail. If this were a European film he and other beleaguered men would stage a revolution, but since it is Hollywood he clones himself. His first clone represents the 'more masculine' side of his ego and takes over his construction job with a vengeance. But this still does not give him enough free time, so he clones himself again, and this clone takes over the household chores and childcare, providing the more 'feminine' side of his ego. Keaton acts as superego orchestrating the other two, but he rules with a hard hand, and they begin to feel put-upon, and finally have one of themselves cloned; but a copy of a copy loses in resolution, so this clone is all Id, interested in eating mostly, sex some of the time, and making a mess the rest of the time.

Twelve Monkeys also contains an example of distributed subjectivity. As in *Rashomon*, each variation on the plot line (future, present and past) assumes a different version of the main character,

Cole (violent felon with a mission, 'mentally divergent' mental patient, innocent child).

Networked subjectivity

If we think of distributed subjectivity as 'one is all' – that is, one subject is spread out over multiple characters, as in the clone examples, or one character contains multiple personalities, as in *Total Recall*, then we can think of networked subjectivity as 'all are one'. In her now classic essay 'The Cyborg Manifesto',[19] Donna Haraway refined the definition of cyborgs into two parts: first, an entity that is half human and half machine; and second, a network of cybernetic organisms, such as human beings who are linked via the Internet and other communication systems, who cooperate to solve urgent social problems in new ways. The Borg in *Star Trek: First Contact* embody both definitions. However, the members of the Enterprise are also coded as a variant of cyborg. Two members of the crew are already cyborgs by the first definition: Geordi, the black engineer, who in former episodes wore a visor over his eyes, now has bright blue contact lenses; and Data, the android who wishes to be human, who now has a human-emotions chip in his programming which he can turn off at will. Enterprise crew are also linked by their identification as Federation members (through their uniforms and their military discipline), their communicators, and the ship computer that enables them to locate each other at will. The differences and similarities between the Borg and the Enterprise crew are explored and compared in the sequence where Picard, the klingon Warf and ensign Hawk don space suits with magnetic boots to carry out a Borg-defeating initiative on the Enterprise surface. The action is staged in such a way that though all three have an identical task and are wearing identical space suits, their responses to the situation remind us of their individuality and differentiate them from the Borg. Still, they are dependent on their technologies for life (their astronaut suits) and linked by a web of social relationships that keeps alive each individual in the group.

But individualism is not unknown to the Borg either. Though the movie, *Star Trek: First Contact*, demonizes the Borg, the television series allowed them a gradually increasing humanity. The first episode to feature the Borg, 'Q-Who?', appeared in 1989. In this episode, Guinan, the bartender/confessor played by Whoopi Goldberg, is posited as a wandering Jew, never assimilated, only tolerated. She is the antithesis of the Borg, who are presented as one amorphous mass, almost a blob that speaks in a group voice and absorbs everything it rolls over. At the end of the episode Guinan points out that now that Borg know they exist, they 'will be coming

19 Donna Haraway, *Simians, Cyborgs and Women: the Reinvention of Nature* (New York: Routledge, 1991).

20 'The Best of Both Worlds', parts 1 and 2 (d. Cliff Bole, w. Michael Piller, 1990).

21 'I Borg' (d. Robert Lederman, w. René Echevarria, 1992).

22 Yvonne Fern, *Gene Roddenberry: the Last Conversation* (Berkeley and Los Angeles, CA, and London: University of California Press, 1994), p. 21. The quote is from a 1985 letter to his friend Dr Charles Musès.

23 'Descent 1 and Descent 2' (part 1: d. Alexander Singer, teleplay Ronald D. Moore, story Jeri Taylor, 1993; part 2: d. Alexander Singer; w. René Echevarria, 1993).

for them'. And indeed they do, in the next two episodes which feature Picard's abduction by the Borg.[20]

As predicted, the Borg have come looking for humans, found a small colony and destroyed it. Then they come up with a plan: to abduct Picard, absorb him, and turn him into a spokesperson who will help them approach Earth. They give him a name, Locutus. Although it is inconsistent with the Borg approach to give their members individual names, the inconsistency is not dealt with. Picard says: 'I am Locutus of Borg', but in the next episode, 'I Borg', Hugh says: 'We are Borg'. Clearly the series is slowly coming to grips with the concept of networked subjectivity.[21] In this same episode, 'I Borg', Geordi succeeds in breaching the Borg programming, as effective as any computer virus, simply by teaching the Borg '3 of 5' to call himself 'Hugh' and Geordi 'friend'. But are they really friends, or is it just another instance of Stockholm Syndrome, in which the prisoner begins to identify with the captors that feed it and cure it?

Gene Roddenberry originally described the Borg as 'sorgs' (short for 'socio-organisms'). Rather than see itself as an individual, each sorg saw itself as a cell in a larger organism.[22] Roddenberry's fear of the world getting divided up into 'individuals and sorgs' is played out in the next two Borg episodes from the *STNG* series, 'Descent 1 and Descent 2'.[23] Here, full play is given to the concept that if a community of minds is networked, it will not produce the kinder, more cooperative society that cyberfeminists envision; rather, the more individual minds are connected to each other, the more they become One Mind, and therefore, fodder for anyone – say a fascist dictator – who has the willpower to harness them. (This dystopic vision of cyborgs was also depicted in the French film *The City of Lost Children* [Jean-Pierre Jeunet and Marc Caro, 1995]). So far, the *Star Trek* way of handling the idea of networked subjectivity is through resistance: such communal subjectivity must be destroyed, re-programmed, as the Borg Hugh was, or it must be destroyed outright, as Lor (Data's evil twin who becomes a Hitler-like dictator of the alienated Borg) and his followers are, because being Borg leads to the oblivion of individual personality and/or the actual destruction of the Real Life body, where our personality is known to reside.

Yvonne Fern, who interviewed Gene Roddenberry extensively towards the end of his life, notes:

> the original concept for the Borg was an insect race, and traces of that idea remain. Their collective mentality, homing instinct, and singleness of purpose are strongly reminiscent of the hive, or the anthill. Certainly, they are not the independent, spirited explorers of space one would expect to encounter in a race as technologically advanced as theirs. The Borg seem to have no

24 Fern, *Gene Roddenberry: the Last Conversation*, p. 22.

spirit. They are devoid of feeling, devoid even of thinking. . . . Roddenberry fluctuated between the fascination of collective consciousness and a fierce, fatherly protectionism for the independent individual of the human species. . . . He had thought about it a great deal, he told me, and if there were some cosmic insistence on unification, he believed it would take place as naturally and painlessly slowly as previous evolution.[24]

The 'cosmic insistence on unification', is one way to describe networked subjectivity.

Still, it is not necessary for characters to be physically linked for them to share (or to be depicted as sharing) a single, linked subjectivity. To return to *Twelve Monkeys*, think of the scientists who speak in one voice and finish one another's sentences. Though they show no visible link, they act as one, their unity depicted symbolically by the single electronic eyeball that contains all of their staring faces.

Agentless perception

When the number of subjects that are linked together becomes too numerous to count, or when the spectator is shown an unattributed point of view that is never justified, then the subjective stance is agentless. There is a look, there is a gaze, but there is no – or seems to be no – consciousness behind it: neither a single consciousness, as there is in distributed subjectivity, nor a multiple consciousness, as there is in networked subjectivity. Think of the gaze of the five thousand cameras in *The Truman Show* (Peter Weir, 1998): though the show is run by its creator, Christof, and watched by millions, it could also be said to be controlled by none. The gaze of those cameras has grown into an institution unto itself.[25] The interactive equivalent are the bots in MUDs: avatars with fixed positions and functions that interact with users who set off their responses. Like zombies in horror films, bots have a narrowly defined range of responses and little margin for spectator identification, at least in text-based MUDs. However, as the technology improves and graphic MUDs become more common, agentless perception (images from eyes that see but do not comprehend, a perception without judgement and visually without memory) will increase along with it. It is already becoming a fixture in Hollywood films, such as *The Truman Show*, the action film *Out of Sight* (Steven Soderbergh, 1998) which has freeze-frames reminiscent of snapshots taken by someone spying on the main character (possibly the female agent's father, but the freeze-frames are never explained or attributed), and *Snake Eyes* (Brian de Palma, 1998). In these films it is usually an institutional gaze that is depicted as agentless. *Snake Eyes* actually explores the

25 Though the film depicted the climax as a battle between Truman and Christof, Andrew Niccol's original script ended with a new show with a new star, a baby girl named Zoe, being watched by Truman and Sylvia and their child, thus confirming that though Truman might have changed his position from in front of the camera to in front of the screen, the agentless institutional gaze remains.

boundaries between an attributed point of view, in the form of the *Rashomon*-like interviews with various witnesses which give different pictures of the murder, and the story told by the numerous surveillance cameras, which have no meaning or influence until one of the characters looks at the video tape or the monitor console.

All three modes of subjectivity – distributed, networked and agentless – can be seen in *Alien 4: the Resurrection* (Jean-Pierre Jeunet, 1997). Ripley, played by Sigourney Weaver, died in Part Three with an alien in her chest. In Part Four it is two hundred years later, and she has been cloned because the military wants to harvest the aliens and use them as military weapons. Ripley is clone number eight; numbers one to seven did not work very well, because what is being cloned is not a single entity, but two: a host and a parasite that is intricately bound up with it. In a key emblematic scene, one of distributed subjectivity, Ripley communes with the earlier clones before euthanizing them.

Clone Number Eight, as Ripley is referred to in the beginning of the film, is the clone that 'works' because the scientists found a workable combination of her DNA and the monster's DNA that would grow in their tubes filled with amniotic fluid. This means that Ripley is now part monster. Her wounds heal quickly, she can hear and feel things the others cannot, she has super-human strength and, most important to our discussion, she has a mental and emotional communication with the aliens – a networked subjectivity – not just the one that she hosted, but all of its progeny as well. The way networked subjectivity is depicted in this film is very promising. The communion between Ripley and the aliens is a more positive view of networked subjectivity than the possession of Picard by the Borg. Although Ripley and the aliens will never be able to live together, communication between them is valuable. Ironically, it is a group of humans who represent a degree of agentless perception: the scientists and doctors who stand in for the institution of the military complex on Earth, who persist in trying to grow or capture aliens in film after film without regard for the consequences.

Conclusions

Since horror, science-fiction and fantasy dominate the world of CD-ROM and on-line games and MUDs, their dark vision of multiform subjectivity has crossed over into Hollywood films – even comic films like *Multiplicity*. Now that the concept of multiform subjectivity, whether distributed, networked or agentless, has been well established in Hollywood, we will probably see it used in the following two ways: first, more utopic depictions of multiform subjectivity will continue to evolve out of the current dystopic ones; and second, multiform plots and multiform characters will migrate

from the horror, science-fiction and fantasy genres to other genres. A brief example of this possibility is the scene in *Broadcast News* (James L. Brooks, 1987) where Albert Brooks dictates a newscast from his living room to Holly Hunter at the news broadcast studio on the phone; she in turn repeats it into William Hurt's earphone so that he can give the news announcement on television which is watched by Albert Brooks, thus closing the circle. At that moment the three are like one linked mind, a moment that is treated as positive and luminous for all three characters, a communion that they cannot return to when they are 'unlinked'. Whether the effect is light or dark, the growth of interactive narrative forms and their effect on linear media is full of promise. A brave new world of scriptwriting has begun.

CGI effects in Hollywood science-fiction cinema 1989–95: the wonder years

MICHELE PIERSON

In the flurry of media excitement that attended the opening of two blockbuster, special effects events in 1997 – the re-release of the *Star Wars* trilogy and the release of *The Lost World: Jurassic Park* – it would be easy enough not to notice that an important period in the brief, but spectacular, history of computer-generated special effects had already passed. All the signs of this passing were, however, already apparent the year before.

In this essay, I want to develop the proposition that big-budget, effects-driven, science-fiction films were popular with audiences in the early-to-mid 1990s because they offered viewers the opportunity to participate in a popular cultural event that put the display of the digital artefact – or computer-generated image – at the centre of the entertainment experience.[1] The aesthetic project governing the production of CGI[2] effects for science-fiction films is frequently represented as being geared towards simulation, but this period of special-effects production also marks the emergence of a popular, techno-futurist aesthetic that foregrounds the synthetic properties of electronic imagery. This is not an aesthetic that describes all computer-generated special effects in Hollywood science-fiction cinema. It neither describes the CGI dinosaurs in Steven Spielberg's *Jurassic Park* (1993) and *The Lost World* (1997), nor the assortment of computer-generated animals in *Jumanji* (Joe Johnston, 1995). And while the CGI in *Star Wars: Special Edition* does not exhibit the same drive for simulation that characterizes the special effects in

1 The decision to describe certain types of computer-generated images as 'digital artefacts' is not one that has been made without reservations. The potential for confusion over this term arises from the fact that within the special-effects industry itself, a 'digital artefact' refers to an extraneous digital object that has been marked for removal in the post-production process.

2 CGI is the industry acronym for computer-generated imagery.

3 I am indebted to Daren Tofts's essay on Australian artist Troy Innocent for directing me to Mandelbrot. Describing the computer-generated imagery in Innocent's work, Tofts writes: 'The overwhelming sensation is of "plastic beauty" (to use a phrase of Mandelbrot's), since we never for a moment doubt their artificiality'. See his 'Troy story', *World Art*, no. 12 (1997), pp. 29–33.

these films, the film's new computer-generated effects have, in Mandelbrot's words, little of the 'plastic beauty' of some of the computer-generated effects in films like *The Abyss* (James Cameron, 1989), *Terminator 2* (James Cameron, 1991), *Johnny Mnemonic* (Robert Longo, 1995) and *Virtuosity* (Brett Leonard, 1995).[3] Aimed at preserving the visual integrity of the original film, the CGI in *Star Wars: Special Edition* is better described by an aesthetic project which takes assimilation and illusionism as its aims, than it is by an aesthetic such as techno-futurism, with its hyperreal chromism, dazzling luminosity and playful plasticity.

Like the decision to re-release the film itself, the aesthetic choices governing the production of the new CGI effects for *Star Wars: Special Edition* were basically conservative. But what is interesting about the film's new CGI effects is not, in the end, how they actually turned out, but the fact that they became the focus for so much public scrutiny and debate in the first place. For at a time when arts-and-effects direction in Hollywood science-fiction cinema seemed to be moving away from techno-futurism – with its insistence on the centrality of the computer-generated image – the release of the *Special Edition* renewed speculation about the aesthetic possibilities of computer-generated imagery in both mainstream and science-fiction media forums.

Science-fiction fan magazines like *Starlog*, *Cinefantastique*, and the more recently established *Sci-Fi Universe* and *SFX*, provide an important cultural site for examining the reasons why science-fiction cinema is the cinema which has most successfully adapted CGI for the cinema screen. For more than two decades they have provided a forum for directors, special-effects artists, supervisors and technicians (as well as magazine editors and contributors), for assessing the range of special effects that works best, not just for particular kinds of effects shots, but also for particular kinds of films. By and large, this has not been an editorializing process (or at least, not until recently). However, it has been a formative one. Over the last five years there has been a great increase in the number of print publications and online forums that have emerged as sites for discussing and evaluating various applications for CGI in terms of their ability, or failure, to meet audiences' expectations of how they should look. But in the early years of Hollywood's experiments with CGI effects, the only publications in which this kind of analysis could be found were science-fiction fan magazines. And although more technical, industry-oriented publications like *Cinefex* and *American Cinematographer* are now more likely to give consideration to aesthetic issues in their coverage of the latest innovations in computer-generated imaging techniques, they have hitherto tended to be much more focused on what Brooks Landon has dubbed 'the *mechanics* rather than the aesthetics' of special effects.[4]

4 See Brooks Landon, *The Aesthetics of Ambivalence: Rethinking Science Fiction Film in the Age of Electronic (Re)production* (Westport, CT and London: Greenwood Press, 1992), p. 66.

5 See Albert J. La Valley,
'Traditions of trickery: the role of
special effects in the science
fiction film', in George S. Slusser
and Eric S. Rabkin (eds),
*Shadows of the Magic Lamp:
Fantasy and Science Fiction in
Film* (Carbondale and
Edwardsville, IL: Southern Illinois
University Press, 1985),
pp. 141–57.
6 Ibid., p. 142.
7 See Christian Metz, '*Trucage* and
the film', *Critical Inquiry* (Summer
1977), pp. 657–75.

8 La Valley, 'Traditions of trickery',
p. 144.

9 Landon, *The Aesthetics of
Ambivalence*, p. 86. On this
issue, Landon also writes: 'In this
respect, SF film intensifies the
fantastic bent of cinema in
general, since its entire aesthetic
can be seen as a writing large of
the experience of the special
effect: in one sense, the science
fiction film can be seen as a
genre focused precisely upon
advocating and valorizing its
effects' (p. 89).

In the mid 1980s, Albert J. La Valley wrote an essay specifically addressing the unique historical relationship that special effects have to science-fiction cinema. This essay – 'Traditions of trickery: the role of special effects in the science fiction film' – begins by posing a series of foundational questions.[5] Among them are questions like: 'What are special effects? What goes on when we watch them? Do they have special rules for their use in science fiction and fantasy, and is their effect here different from that in other kinds of films? What relationship do they have to science-fiction themes? To future technology? To fantasies about technology?'[6] Although it is indebted to Christian Metz's analysis of special effects in '*Trucage* and the film', La Valley's own analysis is ultimately more rewarding.[7] This is because he attends much more closely than Metz to the fact that science fiction demands eye-catching special effects to meet its narrative requirements for never-before-seen imagery. It is also the case, of course, that fantasy and horror films rely on special effects to create surprising, spectacular and what might even be called gleefully anti-mimetic images. The problem of distinguishing between them appears even more complicated once it is remembered that science fiction is a genre which has always harboured a variety of hybrid species within its boundaries (for example, fantasy-SF and horror-SF). Noting how often science fiction shades 'into horror and fantasy at one end of the spectrum, and into realism, and even documentary at its other', La Valley initially tries to settle this issue by opting for a definition of science fiction that leaves room for all of these permutations. 'At its purest', he suggests, 'it is fantasy as a form of technological speculation'.[8]

If there is something anachronistic in this attempt to grasp the essence of science fiction in its purest form – something which cannot quite pry itself loose from a take on the historical forces that shape genres over time which is more idealist than culturalist – it should be noted that La Valley also goes on to argue that while speculation about impossible, improbable or futuristic technologies is a defining feature of the genre, this speculation has been given a number of different inflections over the years. Like La Valley, Landon also refuses to make firm distinctions between fantasy and science fiction, preferring to argue that 'SF film never has been and never can be dissociated from fantasy elements'.[9] Unlike Landon, however, La Valley never makes it clear why it is important to conceptualize science fiction in terms of fantasy at all. If science fiction is to be conceived as 'fantasy as a form of technological speculation', then it would appear that the term 'fantasy' refers not to a genre at all, but to a structuring element of all speculative film genres (including science fiction and horror). However, for the better part of this essay, science fiction and fantasy are, in fact, treated as distinct, if also structurally homologous, genres. 'Unlike other films', La Valley argues, 'science fiction and fantasy films hover between

10 La Valley, 'Traditions of trickery', p. 144.

11 Ibid.

being about the world their special effects imply – i.e. about future technology and its extensions – and about the special effects and the wizardry of the movies themselves'.[10] In both types of films, then, special effects function simultaneously as an element of the narrative and as a distinct form of technological spectacle.

The focus of La Valley's analysis is on the *representational*, rather than *presentational*, dimensions of special effects imagery. Most of the essay is devoted to thinking about the formal restrictions that are placed on the ways that the techno-scientific wonders imagined by science-fiction narratives can be visually represented. La Valley also acknowledges that the special effects in science-fiction films do not just dramatize the thematic materials of plot and narrative, but also 'illustrate what special effects technologies are capable of doing at this particular moment of time'.[11] As well as representing the techno-scientific wonders demanded by science-fiction narratives, they are also *presentations* of the techno-scientific achievements of the filmmaking and special-effects industries to cinema audiences. What is still missing from this account of special effects, however, is not just a more thorough investigation of the processes which have led, over the years, to special effects becoming the main attraction of science-fiction cinema, but also a more thorough investigation of the circumstances which have led to them becoming a significant cultural form for emerging popular, or mainstream, technocultures. Because the special-effects imagery in science-fiction cinema has increasingly come to be bracketed for mainstream cinema audiences – both by the formal organization of the films themselves, and by the formal and informal networks of information about special effects that now play such an important role in the contemporary entertainment experience – as both a techno-scientific *tour de force* for the special effects industry, and a new kind of aesthetic object.

One of the things La Valley could not have predicted back in 1985 is that in the 1990s, computer-generated imaging technologies would not only change the look of special effects in science-fiction films, but also that audiences' relationships to this new cinema of computer-generated special effects would be altered by their everyday encounters with this technology. It *is* significant that in the 1990s, computer-generated imaging technologies have entered many people's homes. It is also significant that along with the domestication of this technology, many different types of print and electronic publications, television programmes and special events – all aimed at instructing, entertaining and informing home computer users about how to become home-producers of special effects – have proliferated in the decade since La Valley's essay was published. Advertisements for multimedia computer packages aimed at the home-producer now regularly appeal to consumers' fantasies of adding special effects to home videos and personal web pages.

12 Ibid., p. 141.

It is also important to remember that discourses focusing on the making of special effects have been around a lot longer than CGI. Books and films about the making of special effects were already popular with audiences in the 1980s. In fact, La Valley's own essay begins by pointing out that '[f]or many young people, knowledge of special effects techniques now offers a kind of lure of stardom and power within the industry previously available only to screenwriters, stars, producers and directors'.[12] The networks for popularizing 'how-to' discourses on special effects were established, in large part, through the publishing activities of science-fiction fan publications. As well as providing an important forum for behind-the-scenes discussions about special effects, magazines like *Cinefantastique* and *Starlog* also stimulated the market for books on the subject by publishing technical manuals focusing on the making of special effects for popular films and television series (like *Star Wars* and *Star Trek*). Long before personal computers introduced the technology for producing computer-generated imagery at home, magazines like the now defunct *Cinemagic*, were instructing readers on how to become producers of special effects. *Cinemagic* was launched by *Starlog's* energetic editor and publisher Kerry O'Quinn. Aimed at Super-8 filmmakers (and would-be filmmakers), each issue focused on a particular special-effects technique, and offered readers practical advice about how to use this technique at home.[13]

13 The idea that today's fans of science-fiction cinema are its future filmmakers continues to be articulated in many science-fiction fan magazines.

In interviews, special-effects luminaries like Denis Muren (who has more than a dozen feature-film effects credits with Industrial Light and Magic [ILM]) and Douglas Trumbull (whose credits include *2001* [1968], *Close Encounters of the Third Kind* [1977], *Blade Runner* [1982], *Brainstorm* [1983], and a growing number of location-based entertainment attractions), often recall their childhood experiences of watching science fiction.[14] These experiences are invariably described in terms that emphasize the intensity with which they scrutinized effects images for clues about how to make them. In the interview that he did for the ILM special edition of *Cinefex*, Denis Muren, for instance, recalls spending hours trying to remember every detail about the images produced by the effects animator and modeller Ray Harryhausen (known in the 1950s for films like *Earth versus the Flying Saucers* [1956], *Twenty Million Miles to Earth* [1957] and *The Seventh Voyage of Sinbad* [1959]).[15] Stories like Muren's have helped to popularize the belief – long cherished by science-fiction fans – that the special-effects industry represents a guild of skilled artisans who have honed their craft by first watching, and later working on, science-fiction films. While this is obviously an idealized view, it has also been shared by many of the modellers, animators, matte painters and designers working in the special-effects industry. The attitude of science-fiction fans, who have treated all branches of special effects as cinematic art forms unto themselves, and the attitude of effects producers, who until recently have

14 The importance of maintaining this legacy also appears in a richly illustrated, folio-sized tribute to Industrial Light and Magic. In this book, a profile of 'The Effects Supervisor' reads: 'Most of ILM's supervisors (and many effects artists in general) got their first taste of the magic of effects watching films featuring the work of such stop-motion wizards as Willis O'Brien and Ray Harryhausen'. See Mark Cotta Vaz and Patricia Rose Duignan, *Industrial Light & Magic: Into the Digital Realm* (New York: Del Rey Books, 1997), p. 122.

15 See Don Shay, 'Dennis Muren – playing it unsafe', *Cinefex*, no. 65 (March 1996), pp. 100–111.

struggled to have their work recognized in these terms within the Hollywood film industry, have therefore been mutually reinforcing.

When *Cinefantastique* began publication in 1970, its editor Fredrick S. Clarke declared his intention of producing a magazine which would be 'devoted to the serious study of horror, fantasy and science fiction'. Part of any serious study of a science-fiction film would have to be close analysis of its special effects. In providing a space within which the aesthetic concerns of special-effects production were taken seriously, effects designers were also presented with the opportunity to begin exploring these concerns in more detail themselves. This has also had consequences for the direction that effects production has taken over the period from the late 1970s to the mid 1990s. For as readerships for aesthetic and 'how-to' discourses on special effects have broadened, art-and-effects direction in science-fiction cinema has increasingly emphasized the aesthetic integrity of the special-effects image. This does not mean that special-effects images were never explicitly presented to audiences as (relatively) discrete technological and aesthetic artefacts in science-fiction films before the late 1970s, or that all special-effects imagery produced during this period can be described in these terms. As the decade draws to a close, we have already witnessed a shift away from a tradition of arts-and-effects direction in science-fiction cinema that reached its apotheosis in the early 1990s with Hollywood's first big experiments with CGI.

In their own work on special effects, Brooks Landon, Vivian Sobchack, and Scott Bukatman have all made claims that share similarities with the arguments being presented here; although none has concentrated quite so specifically on the popular cultural contexts in which aesthetic discourses on special effects first began to be articulated. In order to signal his intention of looking at the history of science-fiction cinema in film-specific, rather than narrative-based terms, Brooks Landon called his introduction to *The Aesthetics of Ambivalence* 'Separated at birth'. Landon's work challenges many of the critical assumptions that have been made about science-fiction cinema in the past. Perhaps his most thought-provoking claim, however, is that the tradition of arts-and-effects direction that begins to emerge from the science-fiction cinema of the late 1970s, marks a return to the aesthetics of early film. For Landon, as for Bukatman, some of Tom Gunning's essays on early cinema have been enormously influential.[16] In a bid to counter a tendency to conceptualize early cinema in terms of its relation to the development of narrative cinema, Gunning has argued that telling stories did not become cinema's dominant concern until somewhere around 1906. Early cinema, according to Gunning, was an 'exhibitionist cinema', a 'cinema of attractions': 'less a way of telling stories than a way of presenting a series of views to an audience'.[17] This re-evaluation of early filmmaking techniques has

16 See in particular, Tom Gunning, 'The cinema of attractions: early film, its spectator and the avant-garde', in Thomas Elsaesser with Adam Barker (eds), *Early Cinema: Space, Frame, Narrative* (London: British Film Institute, 1990), pp. 56–62.

17 Ibid., p. 63.

been supported by a number of other scholars writing in the late 1980s and early 1990s. André Gaudreault, Miriam Hansen and Charles Musser have also produced work in this area which has argued that the *presentational* dimensions of early cinema made it a *different kind* of cinema to that which would come after it.[18] In his study of Porter's involvement with the Edison Manufacturing Company, Musser points out that the term 'presentational' has been appropriated from theatrical criticism.[19] In his and Hansen's work it is used to describe the similarities between the techniques of representation adopted by cinema's first filmmakers and the methods of representation that dominated theatrical productions during the nineteenth century. Their work suggests that in many of the non-actuality films made during this period, scenes and images were presented in ways that emphasized the novel capabilities of the new moving-picture technologies, rather than their ability either to suggest a story or to represent the world at large.

Both Gunning and Musser have cautioned against representing early cinema purely in terms of what Musser has referred to as its 'presentationalism'. They point out that although films made during this period tended to place less value on the verisimilitude of the images being presented to audiences than on their sheer visual impact, they also displayed signs of being organized by some of the representational concerns that would later come to dominate narrative cinema. Nevertheless, it is the importance that both historians place on the presentational dimensions of early cinema that has captured the imagination of scholars of contemporary film like Landon. And it is also why the films of Georges Méliès hold a particular fascination.[20] Of *Voyage dans la lune* (1902) – one of Méliès's 'little abracadabras' or 'trick films' – Gunning has written that '[t]he story simply provides a frame upon which to string a demonstration of the magical possibilities of the cinema'.[21] If this description alone seems to invite comparisons between this early cinema of attractions, and contemporary science-fiction cinema, they are further helped along by Gunning's suggestion that the cinema of attractions did not disappear once the hegemony of narrative cinema had been established, 'but rather [went] underground, both into certain avant-garde practices and as a component of narrative films, more evident in some genres (e.g. the musical)'. In 'some sense', he argues further, 'spectacle cinema has reaffirmed its roots in stimulus and carnival rides, in what might be called the Spielberg–Lucas–Coppola cinema of effects'.[22]

The appeal of this historical narrative for Landon, is that it invites a revisionist history of science-fiction cinema. Instead of trying to conceptualize the history of science fiction in narrative terms, Landon makes an argument for re-conceptualizing the genre in terms of the history of its production technologies. The possibility that science fiction actually has its roots in a 'non-narrative, spectacle-centred' filmmaking that dates back to the earliest days of cinema, is invoked

18 Miriam Hansen, *Babel and Babylon: Spectatorship in American Silent Film* (Cambridge, MA and London: Harvard University Press, 1991); Charles Musser, *Before the Nickelodeon: Edwin S. Porter and the Edison Manufacturing Company* (Berkeley and Los Angeles, CA and London: University of California Press, 1991); and the essays on early cinema in Christopher Williams (ed.), *Cinema: the Beginnings and the Future* (London: University of Westminster Press, 1996).

19 See Musser, *Before Nickelodeon*, p. 8.

20 Although early Edison films were not as flamboyantly theatrical as Méliès's 'little abracadabras', Musser argues that in their depictions of space and time, and in their style of acting and mode of address, they were still very much in the presentational mode.

21 Gunning, 'The cinema of attractions', p. 64.

22 Ibid., p. 67.

to lend weight to his claim that the real history of science-fiction film is the history of its production technology rather than the kinds of science-fiction 'stories' that appear in science-fiction films. The history of science fiction, in other words, is really a story about how changes in the imaging capabilities of new technologies have shaped the genre.

There are a number of important moments in Landon's version of effects history. The late 1970s, however, stand out as a period in which the tendency to make special effects the central focus of science-fiction films becomes dominant; although Stanley Kubrick's *2001: a Space Odyssey* (1968) is also cited as a landmark film in this tradition. One of the things that Landon sees happening in science-fiction films made over this period, is that the always potentially 'interruptive spectacle of special effects' begins to (super)impose 'a kind of counter-narrative' over the narrative being presented at the level of plot and story.[23] What becomes important in the counter-narrative represented by this 'show-stopping' special-effects imagery, is not the power of special effects to represent the other-worldly technologies of future societies and alien civilizations, but the power of special effects to present the awesome imaging capabilities of special-effects technologies themselves. Landon points out that even in films that are broadly critical of technology, the special-effects imaging of this technology is frequently presented as an encounter with the 'techno-sublime'.[24]

The most radical transformation of the historical relationship between what might stil! be called the 'representational and presentational dimensions of special effects imagery' occurs,

however, with the development of computer-generated imaging technologies. Landon's central thesis is that computer-generated imaging technologies represent a 'Wellsian blending of state-of-the-art art with state-of-the-art science in a new hyper-technologized production matrix for SF media that itself invokes or enacts the science fiction ethos as much as or more than the narratives it presents'.[25] Landon's contention is that the real narrative – or, at least, the *really science-fictional* narrative – of films like *Tron* (Steven Lisberger, 1982), *The Last Starfighter* (Nick Castle, 1984), *The Abyss*, and *Terminator 2*, is to be located in the presentation of a fundamentally new kind of imagery. The depiction of science-fiction narratives in these films has in effect been displaced by 'science-fictional modes of depiction'. Landon's discussion of the science-fictional nature of computer-generated imaging technologies ranges over a number of applications for these technologies: virtual reality, music video and computer animation short films. Although there are hints here and there that these applications may, in fact, draw upon different aesthetic criteria for the production of images, they are primarily treated as simulation technologies. For it is specifically their powers of simulation (both real and imagined) which, in Landon's view, makes them science fictional.

By way of prefacing his analysis of the significance of CGI for science-fiction cinema, Landon reveals that he has 'tried to write a kind of science fiction about science fiction (film)'.[26] At its most speculative, this meditation is indeed a fine example of the kind of 'science-fiction thinking' that tries to imagine what the most far-reaching possibilities of a particular line of thought might hold. No one before or since has written a history of science-fiction cinema that has departed so radically from a tradition of film scholarship that has consistently deemed the history of special-effects technologies to be of only marginal interest. If it is arguably time to re-evaluate the relationship between narrative and spectacle in the contemporary science-fiction film – time to again think about how science-fiction narratives *also* set limits on the kinds of special-effects imagery that is being produced for contemporary science-fiction films – it must nevertheless be remembered that any such return has to begin by reckoning with the ways that the genre has been shaped by a tradition of technological experimentation.

When Landon was writing, speculation about the imaging capabilities of computer-generated imaging technologies was just beginning to take off in the mainstream media. The publication of his book, *The Aesthetics of Ambivalence*, in 1992, was sandwiched between the release of *Terminator 2* (1991) and *Jurassic Park* (1993). In the build-up to *Jurassic Park's* release, speculation about the film's computer-generated dinosaurs generated by far and away the most publicity for the film. In fact, no other film so perfectly exemplifies certain aspects of Landon's description of the way that

special-effects imagery functions in the contemporary science-fiction film. In the first scene in which one of the much-anticipated computer-generated dinosaurs is finally unveiled – both to the characters in the film and to the audience in the cinema – the narrative all but comes to halt, the music gradually builds, and shots of characters reacting to the appearance of the dinosaur with wonder and amazement are interspersed with long takes displaying the computer-generated brachiosaur centre-screen.

One of the most powerful discourses on computer-generated imaging technologies centres on the possibility that this technology might one day produce images that are so realistic it is impossible to distinguish them from objects in the real world. This is the dream of simulation that Landon rightly points out has long been debated and explored, both in science-fiction film and literature, and in what he calls, 'science-fiction thinking'. Popular discourses on CGI effects have also focused on the dream of simulation: often presenting the latest Hollywood science-fiction blockbuster as an invitation to participate in the techno-scientific adventure that this dream represents. Like all adventure discourses on technology, discourses focusing on the dream of simulation display all the fascination with 'Edison-like positivism and inventive genius' that Landon associates with filmmakers like Spielberg and Lucas. At the time of its release, *Jurassic Park* was widely billed as a cinematic event which would reveal special-effects imagery that was yet one step closer to realizing the science-fictional dream of total computer-generated simulation. Alongside dreams of total computer simulation, however, other popular aesthetic discourses have also moulded and shaped the look of CGI in science-fiction cinema. While Landon's representation of the aesthetic discourses governing the production and reception of CGI effects consists, for the most part, of speculation about these dreams, other possibilities – other ways of understanding the cultural significance of CGI – might yet be gleaned from the techno-cultural matrix that Landon describes in this work.

Landon's suggestion that computer-generated imaging technologies have already begun to reorganize our relation to the world mirrors aspects of Vivian Sobchack's analysis of electronic space in the last chapter of *Screening Space: the American Science Fiction Film.*[27] Both critics argue that the popularization and pervasiveness of electronic technology has profoundly altered our spatial and temporal sense of the world. Both agree that the hyperreal space of electronic simulation – whether it be the space of computer-generated special effects, video games, or virtual reality – is characterized by a new depthlessness: one which is at the same time expansive and inclusive. However, whereas Sobchack adopts a critical stance towards the deflation of deep space and the excess of surface detail that she associates with the computer-generated image – seeing in it the same aesthetic characteristics that have been invoked by Fredric

27 Vivian Sobchack, 'Postfuturism', in *Screening Space: the American Science Fiction Film* (New York: Ungar, 1987).

Jameson to describe the constitutive features of postmodernism – Landon is unabashedly celebratory. From Sobchack's description of electronic space, he takes only its denotative characteristics: re-figuring them in the image of a much shinier future. Sobchack, he argues, is right to insist that our experience of electronic space is one of spatial dislocation and psychic dispersal. But this, he counters, is also what makes it so exhilarating.

Despite the very different ways in which Sobchack and Landon interpret the new electronic mediascape that both see as a kind of event horizon – establishing the conditions under which computer-generated imagery in science-fiction cinema is figured – they nevertheless agree about what the salient features of this new sphere of cultural production are. Most importantly, both critics argue that the techno-cultural sphere in which science-fiction films are produced and consumed, generates 'a semantic equivalency among various formulations and representations of space, time, and being'.[28] What this means is that the aesthetic characteristics of one form of electronic production are, in all important respects, the same as any other. So when Sobchack refers to something that she calls 'video game consciousness', she is not just referring to how subjects engage with a particular form of electronic production (video games), but is describing the constitutive effects that all forms of electronic production have on consciousness.

One of Sobchack's more intriguing suggestions is that the hyperreal properties of the CGI in films like *Tron* and *The Last Starfighter* actually signify its production in a space with no atmosphere, no respiration, no experience of depth or gravity. The idea that these films construct 'a privileged equivalence between electronic space and "outer" space', is an evocative one.[29] But instead of leading to an examination of the ways that technical and aesthetic discourses on CGI construct this equivalence themselves – by drawing attention, for instance, to the advantages of constructing computer-generated objects in an environment where the effects of gravity do not have to be calculated – the force of this idea is primarily reiterative. For every instance of electronic cultural production is, within Sobchack's own discursive framework, an expression of the same cultural logic: and every effects-laden science-fiction film is a sign that cinematographic space is in the process of being reformulated according to the new electronic coordinates and experiential values of a postmodern, video-game culture.[30]

What the attempts to create homologies between the computer-generated imagery featured in science-fiction films and video games still need to reckon with is the very different ways that the imagery functions in these media. Computer games have adapted many of the techniques of narrative filmmaking to suit the action-oriented idiom of computer-gaming. Techniques for enhancing visual resolution

28 Ibid., p. 229.

29 Ibid., p. 256.

30 Ibid., p. 269.

continue to improve the visual integrity of the graphical interface. Moreover, if one of the characteristics of a computer-game aesthetic has always been the privileging of rendering speed over resolution, the trade-off between the two is becoming less and less determining. All computer-generated imagery displays an array of visual effects that can only be achieved in the electronic realm. However, video games do not place the same emphasis on the aesthetic integrity of the special effect. For even though computer games are regularly punctuated by both aural and visual effects, these special effects do not have the same semantic intensity in the relatively restricted visual field of video games as they have in the luminous, hybrid space of cinema.[31]

The mode of arts-and-effects direction characteristic of science-fiction cinema in the early 1990s is very much directed towards establishing a spectatorial relation to its computer-generated special effects that is wondering, and even contemplative. In action-driven science-fiction films like *The Abyss, Terminator 2, Lawnmower Man* (Brett Leonard, 1992), *Jurassic Park, Stargate* (Roland Emmerich, 1994), and *Johnny Mnemonic*, the presentation of key computer-generated images produces a distinct break in the action. These temporal and narrative breaks might be thought of as helping to establish the conditions under which spectators' willed immersion in the action – their readiness to be carried along by 'the ride' – is suspended long enough to direct their attention to the display of the digital artefact. Effects sequences featuring CGI commonly exhibit a mode of spectatorial address that – with its tableau-style framing, longer takes, and strategic intercutting between shots of the computer-generated object and reaction shots of characters – solicits a contemplative viewing of the computer-generated image. It is equally the case, however, that not all arts-and-effects direction makes the display of the technological and aesthetic integrity of the computer-generated image its central focus. Even within the same film, several modes of presenting special-effects imagery will often be in evidence.

In his essay, 'The artificial infinite: on special effects and the sublime', Scott Bukatman looks at some of Douglas Trumbull's effects work in films like *2001, Close Encounters, Star Trek: the Motion Picture* (1979) and *Blade Runner*.[32] In each of these films, key special-effects sequences are described as being characterized by a spatiotemporal grandeur that typically entails the presentation of a massive technological object or environment. Rather than it being a matter of disrupting cinematographic space, however – of inserting, or installing, a markedly different kind of technological and aesthetic object into a relatively restricted visual and narrative field – Bukatman argues that these sequences are designed to integrate the virtual space of the spectacle with the physical space of the cinema theatre. Instead of being directed towards establishing the conditions

31 For an examination of some of the formal characteristics that are shared by film and video games, see Mark J.P. Wolf, 'Inventing space: toward a taxonomy of on- and off-screen space in video games', *Film Quarterly*, vol. 51, no. 1 (1997), pp. 11–23.

32 See Scott Bukatman, 'The artificial infinite: on special effects and the sublime', in Lynne Cooke and Peter Wollen (eds), *Visual Display: Culture Beyond Appearances* (Seattle, WA: Bay Press, 1995).

under which viewers might obtain some sense of distance from the object being presented, the sheer scope and magnitude of these spectacular vistas is designed to create an immersive experience for cinema spectators. This kind of special effects sequence is aimed, as he puts it, at making spectators feel that *'[they] are there* (even if [they're] not)'.[33] One of the things that distinguishes Bukatman's phenomenology from others that have been discussed in this essay is that it draws together a diverse collection of classical and popular modes of visual display. He locates in Trumbull's effects work a form of spectatorial address that has its antecedents in all kinds of spectacles and exhibition practices: from Renaissance and aerial perspectives, panoramas and landscape paintings to precinematic

phantasmagoria and the early cinema of attractions.[34]

But while there is a strong tradition of this type of arts-and-effects direction in science-fiction cinema, it has been less in evidence in recent years – only occasionally resurfacing in a film like *Contact* (1997), with its deep-space star tour in the opening credit sequence,

and a rollicking, sim-style ride through a CGI worm-hole.[35] Significantly, few of the action-oriented science-fiction films of the early-to-mid 1990s feature the kind of effects sequences that Bukatman describes. A Trumbull effects sequence is described as being 'less the description of an object than the construction of an environment'.[36] Over the years, a number of science-fiction films that have staged encounters with the new technological spaces of cyberspace and virtual reality – *Tron, Lawnmower Man, Johnny Mnemonic, Virtuosity* – have used CGI to render these high-tech environs for film. However, these totally computer-generated effects sequences are not, for all that, fundamentally different in kind to those effects sequences in which cinematographic space is disrupted by the insertion of a computer-generated object. In sequences in which a computer-generated object – a pseudopod, shape-shifter, stargate, energy-ribbon – is composited with live-action footage, the electronic properties of the digital artefact (with its high chrominance and intense luminosity), establish a stark contrast between the computer-generated object and the cinematographic space that frames it. Sobchack makes this point in her analysis of the electronic effects in *Tron* and *The Last Starfighter*. 'The privileging of electronic depiction', she argues, 'here depends upon its *marked difference* from cinematographic space rather than upon its *integration* with it

(however much integration may be "promoted" by the narrative)'.[37] This is the case even where an entire sequence is computer-generated. Although the computer-generated image is not, in this instance, inserted into cinematographic space at the level of the shot – as it is with CGI and live-action composites – it still represents a mode of visual display that differs markedly from the visual style of the dramatic and/or action sequences that flank it. In both types of effects sequences, then, the presentation of CGI effects is

characterized by a visual and temporal disruption in cinematographic space.

What is missing from Sobchack's and Landon's attempts to understand the cultural specificity of the computer-generated image in science-fiction film is more of a sense of how – and under what conditions – computer-generated imagery came to be perceived, not only as the privileged mode of visualization in science-fiction film, but also as the cultural sign of an emerging popular aesthetic: an aesthetic that has been referred to here as 'techno-futurist'.[38] Despite the popularity of technicist discourses on special effects – found in journals like *Cinefex* and *American Cinematographer*, but also in 'making-of' movies and the exhibitions that are occasionally mounted on special effects by science and technology museums – the development of this aesthetic has not been governed solely by technological criteria. There is no question that advanced computer-generated imaging technologies have enabled effects producers in the 1990s to create images that could not have been produced using the technologies available a decade earlier. But much of the computer-generated imagery that struck a chord with audiences in the 1990s represents the refinement, not of a realist aesthetic that takes the cinematographic image as its point of reference, but of a hyperreal electronic aesthetic that takes the cinematographic image as its point of departure.

Bukatman has widened the scope of research on special effects not only by trying to carve out a history for effects production that includes aesthetic practices not limited to the institution of cinema, but also by raising questions about how spectators perceive these spectacles. His examination of what he calls (after Susan Buck-Morss), the 'phenomenological status of these phantasmagoria of progress' is often suggestive, provoking philosophical speculation and yielding unexpected flashes of insight.[39] But there are also occasions where this analysis becomes rather more opaque. This tends to be the case when, like La Valley, Bukatman turns to theorizing spectators' cognitive engagement with special effects. 'Special effects', he argues at one point, 'redirect the spectator to the visual (and auditory and even kinaesthetic) conditions of the cinema, and thus bring the principles of perception to consciousness'.[40] Or, as he later suggests, '[s]cience fiction cinema uses state-of-the-art effects to accommodate still "another realm" of machinery. The effects put machinery in motion, offering technology up to dynamic contemplation.'[41] Although the claim that special effects have a special reflexivity is grounded in Bukatman's work, in an examination of the material, as well as formal, conditions of cinema spectatorship, there is little here to suggest that spectators' perceptions of special effects are also organized by the expectations of this imagery that they bring with them to the cinema. Like Landon before him, Bukatman's account of the material conditions of cinema spectatorship draws upon

38 Philip Hayward and Tana Wollen use the term 'techno-futurism' to describe the rationale behind the production and marketing of new media and communications technologies. See their introduction in *Future Visions: New Technologies of the Screen*, (London: British Film Institute, 1993), pp. 1–9.

39 See Susan Buck-Morss's, '"panoramic" tour of the ur-forms of the phantasmagoria of progress which Benjamin unearthed in his research' for the *Passagen-Werk*, in *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*, (Cambridge, MA and London: MIT Press, 1997), p. 82.

40 Bukatman, 'The artificial infinite', p. 265.

41 Ibid., p. 287.

42 In a discussion about the early cinema of attractions, Miriam Hansen argues that 'the display of diversity also means that the viewer is solicited in a more direct manner – as a member of an anticipated social audience and a public, rather than an invisible, private consumer'. Hansen, *Babel and Babylon*, p. 34. Scholarship on early cinema has prompted an ongoing re-evaluation of the ways in which all cinema – and not just the cinema of attractions – solicits a spectator who is both a private consumer and a member of one or more social audiences. See Sylvia Harvey, 'What is cinema: the sensuous, the abstract and the political', in Christopher Williams (ed.), *Cinema: the Beginnings and the Future* (London: University of Westminster Press, 1996), p. 241. The contours of my own work on Hollywood science-fiction cinema have been very much directed by attempts to find ways of discussing the 'private, social' experience of cinema.

43 See, for instance, Steven R. Holtzman, *Digital Mantras: the Language of Abstract and Virtual Worlds* (Cambridge, MA and London: MIT Press, 1994).

44 See Dennis K. Fischer, 'The last starfighter', *Cinefantastique*, vol. 15, no. 1 (1985), pp. 24–37.

Gunning's, Hansen's and Musser's work on the early cinema of attractions. But in this essay at least, Bukatman does not give the same attention that these film historians do, to the processes by which spectators are addressed, not just as 'invisible, private consumers', but as 'members of an anticipated social audience'.[42]

The anticipated social audience for Hollywood science-fiction films that feature CGI is, first and foremost, an audience for whom this imagery is identifiable *as* computer-generated imagery. Beginning with *The Abyss,* the arts-and-effects direction for films produced in the first half of this decade emphasized the alterity of the computer-generated special effect by formally bracketing the presentation of it off from the action. But the technological specificity of this imagery was also highlighted aesthetically. Pulled, on the one hand, towards photographic realism and, on the other, towards a synthetic hyperrealism, the computer-generated imagery in this cinema exhibits an aesthetic that plays across these two poles. More than anything else, it is this electronic reconfiguring of the cinematographic image which gives key CGI effects in these films their special reflexivity. The drive for simulation – long acknowledged, within the industry, to be something of a digital mantra in the field of CGI effects production – describes but one half of this aesthetic project.[43]

In the many articles covering CGI effects production in science-fiction fan magazines like *Starlog, Cinefantastique* and *SFX,* the development of techniques for rendering images that simulate the physical properties of objects in the real, or known, world have been discussed, debated, and speculated about, in (graphic) detail. But even as far back as the mid 1980s – a long time in computer graphics terms – there was some suggestion that the aesthetic goal for producing feature-film effects for Hollywood science-fiction films may not have been to produce images which could simply be described in terms of photographic realism. Looking over a series of articles that appeared in *Cinefantastique* on the making of the computer-generated imagery for *The Last Starfighter,* there seems to have been little consensus among producers, fans, and critics of this new imagery about how it should look. This is made clear in an article featuring interviews with members of the computer graphics team from Digital Productions. Staged around discussions about the aesthetic merits of the film's special effects, the article begins with a double-page spread featuring an image taken from the film. The caption accompanying the image suggests that: 'the aesthetics are a matter of taste. Fans would say it looks more real than real. [While] detractors [would] point to the same surreal quality as a defect of the technique.'[44]

Designers and animators commenting on the film's CGI effects elsewhere in this issue are divided between those who see the project as an opportunity to demonstrate how much closer computer-generated imaging technologies are to being able to simulate the look

of complex, 3-D objects, and those who are more interested in experimenting with the hyperreal, aesthetic properties of this new electronic medium. It is the opinion of Ron Cobb (effects designer on *The Last Starfighter* and spokesman for the first camp) that '[w]e tend to associate this technology with a lot of garish, candy-apple colors because, essentially, a lot of technicians who developed this technology were in charge of making images, and they tended towards a tasteless excess'.[45] Cobb is even prepared to implicate these geek-meisters in *Tron's* 1982 box-office fizzle. His assessment of where the film went wrong rests upon his sense that '[w]hile *Tron* has some fairly nice colors occasionally, there often tends to be exaggerated, color-blind, horrible colors and I wasn't sure whether that was an inherent limitation in the system or whether it was just the way the people [i.e. technicians] had been doing it'. In the case of *The Last Starfighter,* his own aesthetic impulse was, he says, to go for 'earth tones'. The film's central image, the Gunstar battleship, is all in ochre and sand colours. His explanation for this colour scheme is that 'we were vacillating between not having it too yellow or too brown, nor too metallic'.[46]

For Art Durinski, however, the same aesthetic choices that Cobb so unequivocally derides can be seen as the sign of an emergent – specifically *electronic* – aesthetic. An effects designer on *Tron,* Durinski readily concedes that the computer-generated imagery featured in movies like *Tron* and *The Last Starfighter* 'does not look real'; but, he adds, 'it has a quality that is unlike anything else'. For him, '[t]he real, exciting, creative aspect of computer graphics' lies in being able 'to make something that appears real, and then [in being able] to totally destroy that reality to serve the storyline or serve a design element'. An advocate for the hyperrealism camp, computer graphics effects are, in his words, 'an art and a look all to itself'.[47]

For all its stunning likeness to real-world, three-dimensional objects – solid, textured, light-refracting objects – the aesthetic choices governing the production of the computer-generated imagery that captured the attention of audiences in the early to mid 1990s also indicated a marked preference for imagery displaying the kind of visual properties that can only be achieved in the hyperreal electronic realm of computer generation. Too bright and shiny by far, the hyper-chrominance and super-luminosity characteristic of the CGI effects produced over this period imbued the digital artefact with a special visual significance. This visual significance was augmented by a style of arts-and-effects direction that, by bracketing the computer-generated object off from the temporal and narrative flow of the action, offered it up to the contemplative gaze of cinema audiences. Techno-futurism, then, describes an aesthetics which is at once inclined towards simulation and mimesis – and a decidedly more synthetic, visibly more plastic, mode of visualization. It is significant

45 Ibid., p. 29.

46 Ibid., p. 29.

47 Ibid., p. 30.

too, that the key images of this period – shape-shifting extraterrestrials, new devices for travelling through time and space and virtual subjects of all kinds – represent attempts to imagine a technological future. For no matter how terrible the forces unleashed upon the world by these unholy techno-emanations turn out to be, in the science-fiction films in which they are featured they nevertheless stand as visual projections of a future in which technology figures as a force to be reckoned with.

If the techno-futurist aesthetic characteristic of these computer-generated images made them readily identifiable as electronic artefacts, the experience of watching this imagery unfold on the big screen promised not only to engage spectators in a form of private contemplation, but also to involve them in the public and social screening of a form of visual spectacle that became, for the briefest moment, a sign of the future. For through its computer-generated special effects, the cinema of this period not only animated public speculation about what the future of computer-generated imaging might look like, but in a broader sense, helped to create a visual landscape in which imaging the future was again an exciting prospect.

In every other respect, these films were as lacking in 'the richly imagined future worlds' that science-fiction writers and fans have been demanding from contemporary science-fiction films for quite some time.[48] Indeed, with the lone exception of the *Star Trek* films, the science-fiction cinema of the last decade is still very much steeped in the 'survivalist', 'period look of the future' which, as Andrew Ross has pointed out in his essay, 'Getting out of the Gernsback continuum', is a legacy of the dystopian science fiction which has dominated the literature of the genre for a much longer period.[49] Ross's reassessment of the ideological implications of the progressive futurist aesthetic of the Gernsback era – with its populist, streamline 'promise of a genre that was going somewhere fast' – is directed towards initiating a re-evaluation of the (critically) commonplace assumption that the discursive and aesthetic choices that dominated this period can simply be understood in terms of an 'uncritical technophilia'.[50] Acknowledging that the early formation of science fiction 'was certainly intimate with dominant capitalist ideas about science and technology', Ross suggests that it

> was also responsive to 'amazing' ideas about the future of science and technology that went well beyond the limited purview of industrial capitalism, stretching those limits into unmanageable realms of social invention that could never possibly be met by the subsequently deflationary reality of everyday technology.[51]

The science-fiction cinema of the early 1990s turned to a less progressive, but still techno-futurist aesthetic that, along with the expansion of the market for home-imaging technologies,

48 See the 'Roundtable discussion about why today's science fiction movies are so damned lame', in *Sci-Fi Universe*, no. 24 (May 1997), p. 24.

49 See Andrew Ross, 'Getting out of the Gernsback continuum', in *Strange Weather: Culture, Science and Technology in the Age of Limits* (London and New York: Routledge, 1991).

50 Ibid., p. 110.

51 Ibid., p. 131.

52 Cultural critics like Mark Dery and Claudia Springer have pointed out that these futures have invariably reproduced phallocentric fantasies about technology and gender. See Dery, *Escape Velocity: Cyberculture at the End of the Century* (London: Hodder and Stoughton, 1996), pp. 264–5; and Springer, 'Virtual sex', in *Electronic Eros: Bodies and Desire in the Postindustrial Age* (Austin, TX: University of Texas Press, 1996). While these readings are entirely apposite – and even necessary – it is my contention here that they do not quite register the impact that these shimmering computer-generated objects have had on the contemporary techno-cultural mediascape.

53 See Fredric Jameson, 'Progress versus utopia; or, can we imagine the future?', *Science Fiction Studies*, vol. 9 (1982), p. 151.

54 In their work on special effects, both Landon and Bukatman have argued that encounters with technology in contemporary science-fiction cinema reveal considerable ambivalence about technology. Bukatman suggests that, in fact, '[t]he presence of the sublime in science fiction – a deeply American genre – implies that our fantasies of superiority emerge from our ambivalence regarding *technological* power'. 'The artificial infinite', p. 279.

55 See Jameson's critique of special-effects imagery in the conclusion to *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham, NC: Duke University Press, 1991), pp. 297–418.

rekindled public interest in imagining amazing technological futures.[52]

Musing on the state of contemporary literary science fiction, Fredric Jameson suggested some time ago that the horizon of expectations in which science-fiction fantasies of the future are imagined is such that 'we no longer entertain such visions of wonder-working, properly "S-F" futures of technological automation'. These visions, he points out, 'are themselves now historical and dated – streamlined cities of the future on peeling murals – while our lived experience of our greatest metropolises is one of urban decay and blight'.[53] But Jameson's suggestion that the only progressive futurist project for science fiction is one that dispenses with imaging the future in favour of imaging the present as past, forecloses upon attempts to imagine a future in which technology figures at all. The computer-generated imagery that began tearing great holes in the survivalist aesthetic of Hollywood science-fiction cinema in the 1990s was bracketed by science-fiction narratives that were decidedly more anxious than hopeful about the implications of the spectacular technological futures conjured up by this imagery.[54] If it is also the case, however, that the cinema of this period made the staging of close encounters of the technological kind occasions for precisely the kind of technophilic appreciation of special effects that critics like Jameson have found so disturbing, it also made these images objects of public scrutiny.[55] In science-fiction fan forums, in particular, CGI effects became objects around which debates were waged about what the techno-cultural contours of all sorts of futures might look like. If there is still something progressive about techno-futurism, it lies as much in the impulse to imagine these futures in the first place, as it does in enabling the imaging of amazing technological artefacts to again become the central focus of science-fiction cinema.

As the 1990s draw to a close, Hollywood science-fiction cinema is again in the process of folding back in upon itself, offering up so many versions of a retro-visionist future in which the aesthetic integrity of the computer-generated image is no longer the central focus. Whether it be the low-tech aesthetic of *Escape from LA* (John Carpenter, 1996), the 'make-do', B-grade aesthetic of *Independence Day* (Roland Emmerich, 1996), or the schtick and pastiche of *Mars Attacks* (Tim Burton, 1996), computer-generated special effects have ceased to figure in these films as objects of contemplation and wonder. Even *The Lost World* has replaced the simulationist aesthetic of *Jurassic Park* with an assimilationist aesthetic that, instead of presenting the computer-generated image as an aesthetic object, is directed towards integrating the special effect into the action. In the scene in which the first computer-generated dinosaurs appear in the film, exclamations of wonder from the characters onscreen are gently parodied: 'Ooh, Ahh ... that's how it always starts', says Jeff

Goldblum's character, Ian Malcolm. Instead of being displayed as objects of aesthetic contemplation, bracketed off from the temporal and narrative space of the action, the CGI dinosaurs share the same space as the characters in the scene; threatening to trample all underfoot in a sequence that integrates live-action footage and CGI effects in a dynamic composition which pushes the action to the fore. Every now and then, a CGI effect will pop up and again turn the imaging of a technological artefact into an occasion for contemplation and wonder. But for the moment, at least, the future has once more dropped out of sight in Hollywood science-fiction cinema.

Between science fact and science fiction: Spielberg's digital dinosaurs, possible worlds, and the new aesthetic realism

WARREN BUCKLAND

The film's screenwriter, David Koepp, doubling as an extra, gets gobbled up by the T rex in San Diego. He is listed as 'Unlucky Bastard' in the credits, and that could stand for the writer in this sort of movie, destined to be upstaged by Spielberg and special effects.[1]

This is not science fiction; it's science eventuality.[2]

1 Quentin Curtis on *The Lost World, Daily Telegraph,* 18 July 1997, p. 24.
2 Steven Spielberg, quoted in the press kit for *Jurassic Park* (Universal Studios, 1993).

Why do Spielberg's dinosaurs hold our attention and fascination? One potential answer is that they are not simply fictional, but exist in what philosophers of modal logic call a 'possible world'. A possible world is a modal extension of the 'actual world'. Fiction, on the other hand, we can think of as a purely imaginary world that runs parallel to, but is autonomous from, the actual world. Due to the scientific research underlying both *Jurassic Park* (Steven Spielberg, 1993) and *The Lost World* (Steven Spielberg, 1997) – extraction of prehistoric DNA from insects fossilized in amber – I will argue that both films articulate a possible world because they show one possibility that can emerge from a state of affairs in the actual world. Moreover, beyond Spielberg's dinosaurs, possible world theory can enable film theorists to rethink the nature of filmic fictionality and representation by clarifying both the meaning of

concepts such as mimeticism, realism, depiction, deception, and illusion, and the way these are actualized in the cinema by techniques and technologies such as linear perspective, editing, and special effects.

This process of rethinking and clarification is timely because of the transition taking place in the film industry – from cinema's nineteenth-century technologies (optics, mechanics, photochemistry) to digital technology. I shall limit myself to: examining the unique way special effects in the post-photographic (that is, digital) image articulate possible worlds; identifying the aesthetics of this digital image – or, more precisely, an image that is a composite of the photographic and the digital. I also want to argue that special effects in the digital image have a function to perform beyond the creation of spectacle. Of course, special effects are employed in many films precisely for this purpose. They are also employed to create funny or ridiculous effects (as in Tim Burton's *Mars Attacks!* [1996]). But some films, such as *Jurassic Park* and *The Lost World*, go beyond spectacle by employing special effects to articulate a possible world. Yet critics and theorists of contemporary Hollywood cinema ignore this difference and see no function to special effects beyond the creation of spectacle. Such critics and theorists are unwittingly reproducing the rhetoric of auteur criticism of the late 1950s (particularly the extreme positions of François Truffaut and Fereydoun Hoveyda in *Cahiers du cinéma*) who fetishized mise-en-scene, except that contemporary Hollywood critics are fetishizing digital special effects. To divorce digital special effects from their representational function in films such as *Jurassic Park* and *The Lost World* negates their articulation of a possible world.

Mise-en-scene and special effects

Contemporary Hollywood cinema is frequently identified as promoting the image at the expense of narrative. Typical of this approach is the following comment by Jean Douchet: '[Today,] cinema has given up the purpose and the thinking behind individual shots [and narrative], in favour of images – rootless, textureless images – designed to violently impress by constantly inflating their spectacular qualities'.[3] In this recent statement, Douchet is being dismissive of a cinema that, for him, emphasizes the image over narrative. This is quite unusual, because in the 1960s he advocated, along with other critics writing for *Cahiers du cinéma*, a reading strategy that placed emphasis on mise-en-scene rather than narrative, or the script:

> *Auteur criticism*   :   *mise-en-scene / script*

3 Jean Douchet, quoted in Thomas Elsaesser, 'Louis Lumière: the cinema's first virtualist?', in Thomas Elsaesser and Kay Hoffmann (eds), *Cinema Futures: Cain, Abel or Cable? The Screen Arts in the Digital Age* (Amsterdam: Amsterdam University Press, 1998), p. 45.

The exemplary instance of this exclusive emphasis on mise-en-scene is Fereydoun Hoveyda's paper on Nicholas Ray's *Party Girl* (1958). Hoveyda wrote: '*Party Girl* has an idiotic story. So what? If the substratum of cinematic work was made up simply of plot convolutions unravelling on the screen, then we could just annex the Seventh Art to literature, be content with illustrating novels and short stories . . . and hand over *Cahiers* to literary critics'.[4] This type of extreme argument extends from Truffaut's paper, 'A certain tendency of the French cinema',[5] in which he attacked the French 'cinema of quality' for its privileging of the script rather than the cinematic dimensions of film (precisely, mise-en-scene, or mise-en-shot, if we want to be pedantic). In the 1970s, contemporary film theory translated the auteurists' opposition between mise-en-scene and script into the opposition between image (or spectacle) and narrative:[6]

'contemporary' film theory   :   image-spectacle / narrative

The views of the extreme elements within auteurism are too well known and would be of little importance today if their views were not being reproduced in critical discourse on contemporary Hollywood cinema. In other words, many of today's critics and reviewers are unwittingly reproducing the same rhetoric that Truffaut, Hoveyda and others used to discuss Hollywood cinema in the early 1960s, except that today's critics have replaced a fetishization of mise-en-scene with a fetishization of special effects and spectacular action sequences. The rhetoric from Hoveyda that I have just quoted can be found in numerous reviews and essays on films such as those of Spielberg. Representative of this position is Derek Malcolm's review of *The Lost World*: 'But the special effects brook no argument, being marginally better than those of the first time round and wrapped around the camera like chocolate around an ice-cream. That is all. The rest is amazing dross from the man who made *Jaws*, *Close Encounters* and *ET* – and *Schindler's List*'.[7] However, that is not all. The critic's almost exclusive emphasis on mise-en-scene and special effects is specious at best. It clouded Hoveyda's judgements, since he ended up arguing that '*Party Girl* is Ray's most interesting film to date'[8] – that is, better than *They Live by Night* and *Rebel Without a Cause*. The elements of mise-en-scene that make *Party Girl* an important film for Hoveyda include the following: the moment when Canetto goes into Vicki's dressing room and burns himself on one of the light bulbs that decorate the mirror; the shot of the man sketching during the courtroom scene; the drops of water from the bouquet of roses that cling to Vicki's face; the little flame in the grate reflected in the corner of the mirror as Vicki and Farrell kiss; the scene where Vicki visits Farrell in his apartment: soon after Vicki arrives, Farrell has to leave in order to meet his gangster boss

4   Fereydoun Hoveyda, 'Nicholas Ray's reply: *Party Girl*', in Jim Hillier (ed.), *Cahiers du cinéma: the 1960s* (Cambridge, MA: Harvard University Press, 1986), p. 123.

5   François Truffaut, 'A certain tendency of the French cinema', in Bill Nichols (ed.), *Movies and Methods* (Berkeley, CA: University of California Press, 1976), pp. 224–37.

6   Stephen Heath, 'Narrative space', in Philip Rosen (ed.), *Narrative, Apparatus, Ideology: a Film Theory Reader* (New York: Columbia University Press, 1986), pp. 379–420; editors of *Cahiers du cinéma*, 'John Ford's *Young Mr Lincoln*', in Rosen (ed.), *Narrative, Apparatus, Ideology*, pp. 444–82.

7   Derek Malcolm, 'Monster munch', *The Guardian*, 18 July 1997, p. 8.

8   Hoveyda, 'Nicholas Ray's reply', p. 130.

9   Ibid., p. 125.

10 Leland Poague has developed a
    deconstructionist type of film
    criticism that also concentrates
    on 'inessential' details. See
    'Links in the chain: *Psycho* and
    film classicism', in Marshall
    Deutelbaum and Leland Poague
    (eds), *A Hitchcock Reader* (Ames,
    IA: Iowa State University Press,
    1986), pp. 340–49. See also Tom
    Conley, *Film Hieroglyphs:
    Ruptures in Classical Cinema*
    (Minneapolis: University of
    Minnesota Press, 1991).

11 The issue is more complex,
    because different philosophers
    ascribe a different ontological
    status to possible worlds. At one
    extreme, modal realists such as
    David Lewis argue that possible
    worlds have the same physical
    status as the actual world. At
    the other extreme, antirealists
    such as Nelson Goodman argue
    that all worlds only have a
    virtual existence. The view of
    possible worlds I outline in the
    text is called moderate realism,
    and is developed by Alvin
    Plantinga, Robert Stalnaker and
    Saul Kripke, among others. They
    avoid the extreme claims made
    by modal realists and antirealists
    by setting up a hierarchy
    between actual and possible
    worlds. See the authors'
    contributions in Michael Loux
    (ed.), *The Possible and the
    Actual: Readings in the
    Metaphysics of Modality* (Ithaca,
    NY: Cornell University Press,
    1979).
12 David Lewis, 'Possible worlds', in
    Loux (ed.), *The Possible and the
    Actual*, p. 182.

Rico; when Farrell returns later in the evening, Vicki comes out of the bedroom wearing all her clothes but is barefoot.[9]

In contrast to contemporary critics and reviewers, I will attempt to argue here that *Jurassic Park* and *The Lost World* cannot be reduced to special effects. To reduce it in this way is similar to Hoveyda talking about light bulbs, drops of water, flames reflected in mirrors, and Vicki barefoot in *Party Girl*.[10] In *Jurassic Park* and *The Lost World*, an emphasis on special effects divorced from narrative ignores the film's articulation of a possible world:

Contemporary Hollywood   :   special effects / possible worlds criticism

Moreover, I shall be arguing that the film's representation of a possible world motivates the special effects and action sequences.

'To be existent without existing' (Thomas Pavel)

The theory of possible worlds challenges the philosophy of logical positivism. For logical positivists, the actual world is all there is, and non-actual objects or possible states of affairs are meaningless because they do not correspond to immediate experience. It was only with the rise of modal logic (the study of possibility and necessity) that analytic philosophers broadened their horizons to analyse the possible as well as the actual.

Modal logic studies the range of possible – that is, non-actual – states of affairs that emerge from an actual state of affairs. These possible states of affairs have a different ontological status, or mode of being, to the actual state of affairs. Possible worlds form part of the actual world but have a different ontological status to the actual world. Whereas logical positivists would argue that non-actual possibilities are meaningless, because they do not correspond to the actual world, possible world theorists argue that non-actual possibilities correspond to an abstract, hypothetical state of affairs, which has an ontological status, but one different to the actual world.[11]

The basic premiss of possible world theory is that the world could have been otherwise. David Lewis argues that:

It is uncontroversially true that things might be otherwise than they are. I believe, and so do you, that things could have been different in countless ways. . . . I therefore believe in the existence of entities that might be called 'ways things could have been'. I prefer to call them 'possible worlds'.[12]

Possible world theory has also entered the historian's domain. It may seem paradoxical that a discipline concerned with what has been can

13 Robert W. Fogel, *Railroads and American Economic Growth: Essays in Econometric History* (Baltimore: Johns Hopkins University Press, 1964); Niall Ferguson (ed.), *Virtual History: Alternatives and Counterfactuals* (London: Picador, 1997).

learn anything from the counterfactual philosophical position of possible world theory. Yet the work of R.W. Fogel in the 1960s and, more recently, Niall Ferguson's *Virtual History: Alternatives and Counterfactuals*,[13] propose that possible world theory is able to illuminate what actually happened, propositions that cannot be drawn from the consultation of historical records alone. For example, the proposition that 'Napoleon did not die on St Helena but escaped to New Orleans' contradicts a fact in the actual world (that Napoleon did die on St Helena). For this reason, logical positivists would classify this proposition as empty and meaningless. But in possible world history, that proposition is meaningful in an alternative possible world – a world in which Napoleon escaped to New Orleans. This possible world is not simply fictional because it is grounded in the actual world – namely, the historical figure of Napoleon; and arguably, he remains the same historical figure in the alternative possible world, even though his life story is altered. Because they are grounded in the actual world, possible worlds cannot simply be dismissed as a *jeux d'esprit*, an entertaining diversion from the determinism of thinking only about what already exists or existed. Possible world theory enables us to see the contingency of both historical and cultural events, and even natural laws such as biological evolution.

From the perspective of possible worlds, reality is not simply made up of a fixed realm of facts open to immediate experience, but a complex structure of sub-systems, only one of which is actual. In opposition to logical positivism, the theory of possible worlds stipulates that 'non-actual possibilities make perfectly coherent systems which can be described and qualified, imagined, and intended and to which one can refer'.[14] The notion that one can refer to a non-actual – possible – world has a significant number of consequences for theories of filmic representation, some of which I shall examine later in this paper.

14 Ruth Ronen, *Possible Worlds in Literary Theory* (Cambridge: Cambridge University Press, 1994), p. 25.

The actual and the possible

Michael Crichton's novels *Jurassic Park* and *The Lost World*, as with most of his other novels (such as *Congo* and *Disclosure*, as well as his films *Westworld* [1973] and *Coma* [1978]), do not operate in the realm of pure fantasy, imagination or fiction, but present a possible world, by drawing out extreme consequences from a non-fictional state of affairs in the actual world. When Spielberg's film of *Jurassic Park* was released in Britain in July 1993, much of the media speculated on the actual possibility of cloning dinosaurs. In the BBC programme *Spielberg and the Dinosaurs* one of the first questions asked was: 'With genetic engineering advancing at a startling speed, what if scientists were able to recreate the extinct

15 *Spielberg and the Dinosaurs*, tx 12 July 1993, BBC1.

16 Douglas Palmer, 'Dr Faustus meets the dinosaurs', *New Scientist*, vol. 139, no. 1880 (1993), p. 43.

17 Ibid.

18 Ben Macintyre, 'Mad scientists on the loose', *The Times*, 25 June 1993, p. 14.

19 Nigel Hawkes, 'Reviving rex', *The Times Magazine*, 12 June 1993, p. 32.

species?'[15] The programme suggested that *Jurassic Park* is based upon a credible scientific foundation – the extraction of prehistoric DNA from blood-sucking insects fossilized in amber. In the *New Scientist*, the palaeontologist Douglas Palmer briefly summed up the research carried out by George Poinar of insects trapped in amber, and noted that: 'There is an enormous potential for research in molecular palaeontology . . . two American research teams have independently extracted tiny fragments of insect DNA from fossils embedded in amber. . . . Just a few weeks ago, one of the teams led by Poinar obtained fragments of the oldest yet known DNA, extracted from a Cretaceous plant-eating beetle found in amber from Lebanon'.[16] However, he sounded a sceptical note concerning the possibility of extracting dinosaur DNA from bloodsucking insects and genetically engineering dinosaurs from it: 'Speculation on the viability of recreating dinosaurs from fossil DNA endures despite its extreme improbability'.[17] Nonetheless, in *The Times* Ben Macintyre wrote: 'Despite the assurances of experts that the "science" expounded [in] *Jurassic Park* is only tenuously based on reality, the film has had an effect on America in some way reminiscent of Orson Welles's 1938 broadcast of *War of the Worlds*'. He went on to write: 'Even the relentlessly serious-minded *New York Times* felt moved to reassure its readers in an editorial that "scientists will not have the capability any time soon of resurrecting the dinosaurs" '.[18]

The reason for this intense media speculation is that dinosaurs (unlike many aliens and monsters found in other films) did actually exist, and the research into fossilized DNA is actually being carried out, only not on the level articulated in Crichton's novels and Spielberg's films. For Nigel Hawkes: 'The power of the book [*Jurassic Park*] rests not on puff but plausibility. Like most of the best science fiction, it hovers on the very edge of science fact, creating a nightmare out of the kind of gentle speculation that scientists enjoy'.[19] It is this non-fictional dimension to *Jurassic Park* and *The Lost World* that enables us to characterize them as articulating a possible world. Both the novels and the films are taking new scientific ideas to their logical (or illogical) conclusions. In other words, *Jurassic Park* and *The Lost World* begin from scientific fact (the actual), and then take these facts to their furthest consequences (the possible). Because it takes as its starting point the actual, then it is not pure fantasy (the impossible). The novels and the films therefore present a possible world, which exists between science fact and science fiction. Below I shall begin to distinguish the presentation of a possible world in novels and films, since film (or, at least, the post-photographic, or digital image) has the unique capacity to present access to possible worlds, and to combine seamlessly the actual with the possible, by means of digital special effects. The specificity of film's presentation of possible worlds therefore lies in its digital capacity.

Others have theorized a similar concept to possible worlds. In *Hauntings* Joseph Natoli outlines the relation between the inconceivable and conceivable in popular film, and suggests that the ability to make the inconceivable appear conceivable is one of the main attractions of a film. He writes:

> the film [can make] conceivable what the culture had not itself held as conceivable. The film [can bring] to the level of representation what has not already existed as a 'something' within the culture. The culture couldn't give us the means to categorize ... popular films do put off and play with the as-yet inconceivable. And we are, as viewers, the ones toward whom all of this putting off and taking on is directed.[20]

20 Joseph Natoli, *Hauntings: Popular Film and American Culture 1990–1992* (Albany, NY: SUNY Press, 1994), pp. 3–4.

Similarly, in a discussion of the difference between imagination and fantasy, Ernst Bloch argues that only imagination possesses what he calls 'an expectable not-yet existence ... [that] anticipates a real potentiality'.[21] Likewise, in *The Fantastic* Todorov identifies a form of literature he calls the 'instrumental marvellous', in which 'we find gadgets, technological developments unrealized in the period described but, after all, quite possible'.[22]

21 Ernst Bloch, *The Utopian Function of Art and Literature: Selected Essays* (Cambridge, MA: MIT Press, 1988), p. 105.
22 Tzvetan Todorov, *The Fantastic* (Ithaca, NY: Cornell University Press, 1973), p. 56.

The reference world in *Jurassic Park* and *The Lost World* is not the actual world (these films are not documentaries), nor is it a purely imaginary world (these films are not purely fictional either). Their reference world is a possible world that is very similar to the actual world. Previously we saw how possible world historians altered the laws of historical fact to produce counterfactual histories. *Jurassic Park* and *The Lost World* mark their difference to the actual world by altering a scientific law of nature – namely, biological evolution by means of genetic engineering. The fact that this genetic engineering is being carried out in the actual world, only not on the scale depicted in *Jurassic Park* and *The Lost World*, demonstrates that there is a strong accessibility relation, or compatibility, between the actual world and the possible world of *Jurassic Park* and *The Lost World*. The research in molecular palaeontology mentioned previously has not discovered any dinosaur DNA; it has discovered prehistoric insect DNA. *Jurassic Park* and *The Lost World* represent a possible world from the extremely small probability in the actual world of eventually finding dinosaur DNA in a blood-sucking insect fossilized in amber and then 'growing' dinosaurs from this DNA. However, Spielberg has actualized this extremely small probability on the movie screen with the aid of digital special effects.[23]

23 Of course, Spielberg also employed the Stan Winston Studio to design and build the live action dinosaurs. However, these are 'profilmic' special effects that can also be found in theme parks; here I am only concerned with specifically filmic special effects.

Contemporary Hollywood: a composite cinema

We currently see before our very eyes in contemporary Hollywood cinema a composite – a composite of the optical (or photographic)

and the digital (or post-photographic) image. In the following section I shall attempt to determine the aesthetics and epistemic status of this composite.

Photography is dependent upon the presence of pre-existing real objects, whose appearance is automatically reproduced by means of optics and photochemistry (or electronics, in the case of video). The photographic image is therefore indexically bound to the actual world. The photographic is an analogue of the real. However, the digital (or post-photographic) image is not determined or limited to the actual world in the same way. Whereas the photographic image is an analogue of the pre-existing real objects whose appearance it reproduces automatically, the digital image is produced by numerical digital codes, each of which is then realized on screen as a pixel, or point of light. The continuous lines, masses, and contours of the analogue are divided up into discontinuous, discrete fragments of information, or pixels, on a monitor. Lucia Santella Braga points out that:

> Each pixel corresponds to numerical values that enable the computer to assign it a precise position in the two dimensional space of the screen, within a generally Cartesian coordinate system. To those coordinates are added chromatic coordinates. The numerical values [the digital code] transform each fragment into an entirely discontinuous and quantified element, distinct from the other elements, over which full control is exercised.[24]

24 Lucia Santella Braga, 'The prephotographic, the photographic, and the postphotographic', in Winfried Nöth (ed.), *Semiotics of the Media* (Berlin: Mouton de Gruyter, 1997), p. 125.

The crucial phrase here is 'over which full control is exercised'. The 'filmmaker' has the potential to transform each pixel into an entirely different value, for each pixel is defined in terms of a numerical matrix that can be modified and transformed by a mathematical algorithm. 'The result', writes Braga, 'is that the numerical image is under perpetual metamorphosis, oscillating between the image that is actualised on the screen and the virtual image or infinite set of potential images that can be calculated by the computer'.[25]

25 Ibid., p. 126.

Practitioners of the special effects industry distinguish between invisible and visible special effects. Invisible special effects, which constitute up to ninety per cent of the work of the special effects industry, simulate events in the actual world that are too expensive or inconvenient to produce, such as the waves in James Cameron's *Titanic* (1997). As their name implies, invisible special effects are not meant to be noticed (as special effects) by film spectators. Visible special effects, on the other hand, simulate events that are impossible in the actual world (but which are possible in an alternative world), such as the dinosaurs in *Jurassic Park* and *The Lost World*. The crucial aesthetic point in relation to the digital special effects in these two films in particular is that, while clearly visible, these effects attempt to hide behind an iconic appearance; that is, they are visible special effects masquerading as invisible

effects. In other words, the digital images combine the aesthetics of both visible and invisible special effects, since they have the potential to replicate the realism and illusionism of the photographic image by conferring a perfect photographic credibility upon objects that do not exist in the actual world.

From this discussion it is possible to determine the motivation for the digital special effects in Spielberg's *Jurassic Park* and *The Lost World*: namely, to simulate the actuality of dinosaurs living in the present day. This actuality is of course an illusion – or, more accurately, what Richard Allen calls a sensory deception,[26] which shows dinosaurs inhabiting a world that otherwise looks like the actual world. In accordance with Allen's term, we see something that does not exist, but this does not necessarily lead us to believe that it actually exists. Of course, such deceptions have been created before by optically printing two separately filmed events onto the same strip of film. The result is a composite, or layered image. In theory, this optically produced composite fabricates a spatio-temporal unity, giving the impression that the two separate events are taking place at the same diegetic space and time. The first event may be of live actions, and the second event may consist of stop-motion animation. However, the optical and photochemical equipment used in this process has inherent limitations that cannot be disguised, such as loss of resolution, grain, and hard edge matte lines. Therefore, although optical composites can always give the impression that the two separate events occupy the same screen space, they eventually fall short in convincing the increasingly sophisticated spectator that the separate events occupy the same diegesis. Digital compositing equipment does not have the technical limitations inherent in optical printers, and so it can create a more seamless blend of live action and animation, leading to the deception that the composited events do occupy the same diegesis.

In *Jurassic Park* and *The Lost World*, this deception is heightened even further in the moments when the digital dinosaurs and live-action characters interact. In these shots, Industrial Light and Magic (ILM) has created a seamless fusion of live action and computer-generated dinosaurs. Such a fusion and interaction greatly contributes to the realism of these films. We can even argue that (however paradoxical it may sound) the shots showing the humans and digital dinosaurs interacting are the digital equivalent of the long takes and deep focus shots praised by André Bazin for their spatial density and surplus of realism, in opposition to the synthetic and unrealistic effects created by editing. According to Bazin, there are three types of realism in the cinema: an *ontological* realism, which (to paraphrase Bazin) restores to the object and the decor their existential density, the weight of their presence; a *dramatic* realism, which refuses to separate the actor from the decor, the foreground from the background; and a *psychological* realism, which brings the

26 Richard Allen, *Projecting Illusion: Film Spectatorship and the Impression of Reality* (Cambridge: Cambridge University Press, 1995).

27 André Bazin, *Orson Welles: a Critical View* (Los Angeles: Acrobat Books, 1991), p. 80.

28 Stephen Heath, *Questions of Cinema* (London: Macmillan, 1981), esp. Chapter 3.

29 André Bazin, 'The virtues and limitations of montage', in *What is Cinema?* Volume 1, trans. Hugh Gray (Berkeley, CA: University of California Press, 1967), pp. 41–52.

spectator back to the real conditions of perception, a perception which is never completely predetermined.[27] For Bazin, all three types of realism are achieved via the long take and deep focus, because these techniques maintain spatial unity.

In light of the exponential advances in film theory since Bazin, we need to discuss a fourth type of realism in the cinema: the impression of reality, developed in the 1970s within a psychoanalytic (read Lacanian) framework, of which Stephen Heath's work on suture is representative.[28] As is well known, suture designates a process whereby the spectator is continually positioned and repositioned in an imaginary, as opposed to symbolic, relation to the image. Positioned in an imaginary relation to the image, the spectator enjoys a sense of mastery and pleasure, since she/he gains the impression of being an all-perceiving eye (analogous to the child at the mirror phase). The result of this imaginary positioning is that the spectator perceives the space of the image as unified and harmonious. For Heath, this position of imaginary plenitude and spatial unity constitutes the cinema's impression of reality. This impression is not, therefore, based on the image's relation to profilmic reality, but on the cinema's ability to conceal from the spectator the symbolic dimension of the image (the image as signifier, as representing lack). Inevitably, the symbolic dimension of the image becomes apparent to the spectator when this illusion of all-seeingness is broken – most notably, when attention is drawn to offscreen space. The spectator's perception of spatial unity and harmony in the image is similarly broken. But a cut to this offscreen space realigns the spectator to an imaginary relation to the image (that is, sutures the spectator back into the film), and restores to the image the sense of unity and harmony – at least until the symbolic dimension of the image becomes noticeable to the spectator once more. According to this theory, realism is nothing more than an effect of the successful positioning of the spectator into an imaginary relation to the image, a position which creates a sense that the film's space and diegesis is unified and harmonious.

Heath and Bazin share this privileging of spatial and diegetic unity, despite the many differences that otherwise distinguish their respective accounts (Heath's emphasis that this unity is imaginary, that it has ideological effects, and so on). Bazin privileges spatial unity throughout his work, but I shall look at the long footnote to his essay 'The virtues and limitations of montage'.[29] He refers to a scene from the film *Where No Vultures Fly* (Harry Watt, 1951). The film is about a young family who set up a game reserve in South Africa. In the scene that Bazin discusses, the young son of the family picks up a lion cub in the bush and takes it home. The lioness detects the child's scent and begins to follow him. The lioness and the child with the cub are filmed separately, and the shots are simply edited together. But as the child reaches home, the director abandons his

30 Ibid., p. 49.

31 Ibid., p. 50.

32 Edward Branigan, *Narrative Comprehension and Film* (London and New York: Routledge, 1992), pp. 100–107.

montage of separate shots that has kept the protagonists apart and gives us instead parents, child and lioness all in the same full shot. 'This single frame', writes Bazin, in 'which trickery is out of the question gives immediate and retroactive authenticity to the very banal montage that preceded it'.[30] In this particular example, the realism of the shot for Bazin is a matter of spatial unity, in which the child and the lioness clearly occupy the same diegetic space. Indeed, Bazin concludes his footnote by writing that: 'Realism here resides in the homogeneity of space'.[31] More specifically, the realism resides in the fact that this homogeneity of space is created optically.

In the digital images of Spielberg's dinosaur films, trickery is of course employed to bring together in the same full shot humans and dinosaurs. The first sighting of the digitally created dinosaurs in *Jurassic Park* is significant in this respect. Approximately twenty minutes into the film, Grant (Sam Neil) and Sattler (Laura Dern) are given a tour of the park, where they see the dinosaurs roaming around. The dinosaurs, however, do not simply 'appear' in the film; instead, they are depicted through a strongly orchestrated point-of-view sequence. The jeep transporting Grant and Sattler is brought to a sudden halt. In the back, Grant looks off-screen right and the camera dollies in on his face. The camera cuts to a new position as he then jumps out of his seat, takes off his hat and sunglasses, maintaining his face full frame. But instead of cutting to what he sees, the camera instead cuts to Sattler, sitting in the front seat of the jeep looking at a large leaf. Two additional shots then depict Grant's hand as he forcefully turns her head away from the leaf and towards offscreen space. She similarly jumps out of her seat, mouth agape, and takes off her sunglasses. Only then do we cut to this offscreen space – of a brachiosaur. Furthermore, Grant and Sattler appear in the shot, which therefore only represents their awareness, rather than their actual point of view. Or, in Edward Branigan's terms, the shot is externally (rather than internally) focalized around the collective gaze of Grant and Sattler, since they are present in the shot of the brachiosaur.[32] Numerous shots of other interactions between humans and dinosaurs populate both *Jurassic Park* and *The Lost World*. What this means is that ILM has created a seamless composite of both the digital and analogue image in the same shot - that is, layers, combines and merges the digital and the analogue into a single coherent image, resulting in a unified diegetic space. The films that ILM has worked on during the 1990s (not only Spielberg's dinosaur films, but also *Hook* [1991], *Terminator 2* [1991], *Death Becomes Her* [1992], and *Dragonheart* [1996]) constitute an authentic composite – or a mixed-media – cinema.

Contemporary Hollywood has thus combined features of digital special effects with narrational procedures of illusionist realism. Another instance of this can be seen in respect of camera movement which, rather as it did with the advent of sound, poses special

problems for the composite mode. Initially, it was impossible to use camera movement when compositing live action with special effects or animation. But ILM was able to overcome this fundamental principle of compositing in their breakthrough film *Who Framed Roger Rabbit?* (Robert Zemeckis, 1988). This film created a seamless fusion of cel animation and live action while using extensive camera movement:

> The commandment of locking down cameras [that is, keeping them stationary] for effects photography was particularly strict in filming and compositing live action and animated elements. *Who Framed Roger Rabbit?* would not only break the mold and have a lively camera tracking both live actors and animated cartoon characters, it would be up to ILM to see that the twain would meet – to create through optical alchemy a world where humans and cartoons could live together.[33]

In previous attempts to combine live action and cel animation, the live action had to be filmed using a stationary camera to provide the animators with fixed reference points around which to integrate the animation. However, this resulted in a static composite in which the live action and animation, although occupying the same screen space, did not fabricate the impression that they are interacting with one another in the same diegesis. With *Who Framed Roger Rabbit?*, ILM created a more believable composite partly by means of camera movement, which gave the impression that the camera is equally following the live action and cartoons, resulting in the illusion that they are occupying the same diegesis. This impression is created through the compositing of digital special effects and live action by means of motion control.[34]

Advances in computer technology and software enabled Spielberg to use more complex camera movements in *The Lost World* than in *Jurassic Park*, as well as more intricate interactions between the digital dinosaurs and the live action. The result was a believable composite of live action and computer generated dinosaurs. *The Lost World* begins with an intricate interaction between a young girl and dozens of small compys. When Ian Malcolm (Jeff Goldblum) and his team visit Site B on Isla Sorna, they first encounter a herd of stegosauruses which, significantly, pass in front of, as well as behind, the team. And when the second team, headed by Roland Tembo and Peter Ludlow, invade the island in an attempt to catch the dinosaurs, we see 3-D interaction between them and the digital dinosaurs. And this is the primary difference between *Jurassic Park* and *The Lost World*: it is not a matter of fifty per cent more dinosaurs in the second film, but a more complex series of composited interactions between the live action and computer-generated dinosaurs.

What are the consequences of this process of compositing the photographic and post-photographic images using digital rather than

33 Mark Cotta Vaz, *Industrial Light and Magic: Into the Digital Realm* (London: Virgin Publishing, 1996), p. 123.

34 Motion control is a technique that creates repeatable camera movement by programming the movement into a computer. For an account of the way motion control is combined with live action and digital special effects, see Alison McMahan, 'E-motional control', *Millimeter* (November 1989), pp. 123–32.

optical technology? The interactions created between the digital dinosaurs and live action/real backgrounds within a single shot help to create a new realism in the digital image, for the effects create the illusion of spatial and diegetic unity. This is analogous to Bazin's discussion of spatial unity in the shot from *Where No Vultures Fly*. Moreover, ILM's digital compositing creates all three types of realism identified by Bazin: ontological realism, in that the digital dinosaurs appear to have equal weight and density as the photographic background and live action characters; dramatic realism, in that they are seamlessly blended into, and interact with, the photographic background and live-action characters; and psychological realism, in that they are seen to occupy the same space as the photographic background and live-action characters. Finally, Heath's discussion of the impression of reality – in which this impression is created by suturing the spectator into an imaginary relation to the image, producing the impression that the image's space is unified and harmonious – is also applicable to the new digital technology, since it conceals the symbolic mechanisms from the spectator more seamlessly than optical technology, thus suturing the spectator into this imaginary relation. It is in the reproduction of the three types of realism central to the Hollywood feature film as conceived by Bazin, together with Heath's theory of suture, that digital cinema continues the practices of realism and illusionism.

As a final point, the composite mode has also developed a digital effect that reinforces the impression that digital and analogue events take place in the same unified space and diegesis: the illusion that spectators are watching movement. This effect is the motion blur. In live-action shots, when people and objects move, they become blurred. However, when objects are moved via stop-motion animation they are not blurred; instead, the animated model simply consists of quick, hard movements. As each frame is exposed, it photographs a still model. Before the next frame is exposed, the model is moved

very slightly. The next frame then records the result of that motion, but it does not photograph the motion itself. The result is that the model is always pin sharp, however fast it is meant to be moving. But in producing motion in Spielberg's digital dinosaurs, motion blur is added to the image. In the composites, the live action characters have optical blur when they move, and the digital dinosaurs have digital blur when they move. This 'limitation', which is automatically generated in the photographic image and simulated in the digital image, strengthens the illusion that the humans and dinosaurs occupy the same diegesis.

We are now in a better position to consider the spectator's investment in the realism and illusionism of the image in the composite mode. As we have already seen, the special effects in films such as *Jurassic Park* and *The Lost World* attempt to combine the aesthetics of both visible and invisible digital special effects – to repeat what I said above, they have the potential to replicate the realism and illusionism of the photographic image by conferring a perfect photographic credibility upon objects that do not exist in the actual world. In other words, digital special effects simulate realism and illusionism as theorized by both Bazin and Heath, whereas in other films, visible special effects by themselves are used to create totally synthetic, futuristic worlds. For the moment, we are only concerned with the digital image's simulation of realism and illusionism and, more particularly, in the way spectators react to this simulation.

Firstly, we can look at the two approaches to the way the film spectator's set of beliefs regarding the realism and illusionism of the fiction film have been theorized – the psychoanalytic theory (epitomized in Heath's theory of suture, discussed above) and the more recent cognitive theory (of Joseph Anderson, David Bordwell, Noël Carroll, Murray Smith and Ed Tan).[35] The difference between these two theories of fictional representation concerns the ontological commitment the spectator is regarded as investing in the fictional objects. In psychoanalytic theory the investment is high, to the extent that it involves a modification of consciousness (the spectator is positioned in an imaginary relation to the image), whereas in cognitive theory the investment is low or zero. For cognitivists, the spectator simply knows that fictional objects are unreal; there is no need to resort to systems of belief regarding the spectator's investment in the ontology of fictional objects. For this reason, cognitivists tend to reject the illusionistic theory of realism altogether.

Whether either the psychoanalytic or the cognitive theory offers an accurate or plausible account of fiction is a moot point. What I want to emphasize here is that theories of fictional representation cannot adequately characterize the belief system that spectators require to comprehend the worlds articulated in films such as *Jurassic Park* and

35 Joseph Anderson, *The Reality of Illusion: an Ecological Approach to Cognitive Film Theory* (Carbondale, IL: Southern Illinois University Press, 1996); David Bordwell, *Narration in the Fiction Film* (London: Routledge, 1985); Noël Carroll, *Theorizing the Moving Image* (New York: Cambridge University Press, 1996); Murray Smith, *Engaging Characters: Fiction, Emotion, and the Cinema* (Oxford: Clarendon Press, 1995); Ed Tan, *Emotions and the Structure of Narrative Film: Film as an Emotion Machine* (New Jersey: Lawrence Erlbaum Associates, 1996).

The Lost World. When presented with a possible world on screen, spectators do not make a high ontological commitment to the reality of the objects on screen, but neither do they simply reject them as imaginary. The digital image can, by means of special effects, make the possible believable. The spectator's system of belief can be characterized in terms of 'What if', 'As if', or 'What might have been' propositional attitudes. The modality of these propositions indicate that (*pace* the modal realism of David Lewis), the existence of possible worlds is mind dependent. This conceptual approach to possible worlds reveals the hierarchy set up by possible world theorists, which posits that only actual states of affairs exist – that is, are mind independent. Possible, or unactualized states of affairs are mind dependent. Possible worlds exist in so far as they are thought of, hypothesized, imagined or assumed. Nonetheless, possible world theory is not merely concerned with the possibility in thought of unactualized states of affairs, but with the probability of occurrence of the unactualized but possible state of affairs. This is what makes films that articulate a possible world so compelling: the probability of occurrence of scientists finding dinosaur DNA and 'growing' dinosaurs from it, are presented as if they were mind independent – that is, actual states of affairs. The power in the presentation of a possible world is increased when it is actualized on the movie screen with the aid of digital special effects, which create the perceptual illusion that the possible world is actual. The spectator's belief system regarding films that articulate possible worlds can therefore be characterized as a combination of modal propositions (descriptions of possible worlds) and declarative propositions (which describe the actual world).

One advantage of the theory of possible worlds to film theory is that it explores the interface between a film and social reality, but without returning to any naive theories of mimeticism. Marie-Laure Ryan points out that: 'The pragmatic purpose of counterfactuals is not to create alternative possible worlds for their own sake, but to make a point about [the actual world]',[36] namely, to emphasize that the actual world is not necessarily the best of all possible worlds, and that the actual world can be otherwise if a different set of conditions prevail.

Hopefully, the value of the theory of possible worlds in understanding the huge attraction of Crichton's novels and Spielberg's films is more evident. *Jurassic Park* and *The Lost World*, the books and the films, represent a possible world, which can be summarized as follows: 'If dinosaurs could be resurrected by scientists using dinosaur DNA extracted from prehistoric blood-sucking insects fossilized in amber, then these books or films show one possible outcome'. Spielberg's films go one step further than Crichton's novels because digital special effects create a new aesthetic realism by making visible and believable a possible world.

36 Marie-Laure Ryan, *Possible Worlds, Artificial Intelligence and Narrative Theory* (Bloomington, IN: Indiana University Press, 1991), p. 48.

As with the best science fiction, Spielberg's *Jurassic Park* and *The Lost World* are grounded in science fact, but they go beyond those facts to create a possible world where the extreme consequences of the social and economic exploitation of contemporary technology are graphically illustrated using digital special effects.

Many film critics and theorists give the impression that special effects and action sequences are unmotivated in contemporary Hollywood cinema. In some films, of course, they are. But in *Jurassic Park* and *The Lost World*, digital special effects are motivated by the attempt to make the possible believable. Critics who discuss these films in terms of unmotivated special effects are unwittingly continuing the auteur criticism of the early 1960s by ignoring or by-passing the script in favour of mise-en-scene. The extremist members of *Cahiers du cinéma* fetishized mise-en-scene. In a similar vein, contemporary film critics and theorists fetishize special effects.

Spielberg's two films are not representing in a neutral manner the world of Crichton's novels, since the production technology of the digital image is actualizing that world through the process of visual concretization and intensification. In the end, Spielberg's two films are not only representing what is technologically possible in genetic engineering in another world, but also what is possible in digital special effects technology in the actual world.

reports and debates

debate:

Wound envy: touching Cronenberg's Crash

MARQ SMITH

> *The frantic use of automobiles is not . . . for the purpose of going somewhere in particular; here it is not a priori a question of distances to cross, which creates inevitably new travel conditions. To go nowhere, even to ride around in a deserted quarter or on a crowded freeway, now seems natural for the voyeur-voyager in his car.*
>
> Paul Virilio[1]

1 Paul Virilio, The Aesthetics of Disappearance, trans. Philip Beitchmann (New York: Semiotext(e), 1991), p. 67.

2 See Barbara Creed, 'Anal wounds, metallic kisses', Michael Grant, 'Crimes of the future', and Fred Botting and Scott Wilson, 'Automatic lover', Screen, vol. 39, no. 2 (1998), pp. 175–92.

Screen is right to have begun a debate on David Cronenberg's *Crash* (1996), a film which seems to have caused so much controversy and yet, up to this point, has neither received nor generated sagacious consideration in film studies.[2] Perhaps the reasons for this noisy silence lie with the manner in which *Crash* makes the marriage of desire and death a beautiful thing. Indeed, no one should ever have doubted the sensual poetic beauty of death's aesthetics. In approaching the proximity of *Crash* one might talk of an anticipation where sacrificial urgency goes beyond vanity, of being on the verge, the sublimity of losing control, of a meeting and of a coming together. A meeting by accident, a coming together of strangers. Of the erotic tenderness of impact. The painful pleasures of the crash, the intimacy of the graze, the arousal of the head-on collision. A touching. The union of the shapes and spaces of an imploding

3 Georges Bataille speaks of a
copula as a vehicle of love in
'The solar anus', in Georges
Bataille, *Visions of Excess:
Selected Writings, 1927–1939*,
ed. and trans. Allan Stoekl, with
Carl R. Lovitt and Donald M.
Leslie, Jr (Minneapolis, MN:
University of Minnesota Press,
1985), pp. 5–9, 6. The US trailer
for *Crash* speaks of 'love in the
dying moments of the twentieth
century'.

4 Georges Bataille, 'Hegel, death
and sacrifice', trans. Jonathan
Strauss, in Allan Stoekl (ed.),
Yale French Studies, no. 78
(1990), special issue 'On Bataille',
p. 16.

5 See Octavio Paz, 'Order and
accident', in *Conjunctions and
Disjunctions*, trans. Helen Lane
(New York: Arcade Publishing,
1990), pp. 103–13, 112.

6 Friedrich Nietzsche, 'Of voluntary
death', in *Thus Spake
Zarathustra*, trans. R.J.
Hollingdale (London: Penguin,
1969), pp. 97–9.

7 J.G. Ballard, *Crash* (London:
Vintage, 1995), p. 13.

8 Sigmund Freud and Joseph
Breuer, *Studies on Hysteria*,
trans. James and Alix Strachey,
The Pelican Freud Library Volume
3 (Harmondsworth: Penguin,
1974), p. 393.

moulded interior and the enfolding surfaces and planes of body parts reaching out for intimacy. A crash course in love.[3] The fusion of every polymorphous perversity sanctioned by a deviant technology, every anatomical meld, every possible permeation of corporeal and physiological contact. Finally, at last, a remembering. The memory of a unique event that every deformity signals. An aching, barely sensed experience of pain and desire. The invention of a new algebra: wounds – not just facial and genital injuries (we should not presume or fixate) – become 'handholds', contact points for all of the possibilities to come; a tracing out of the machine through the imprinted contours of these mysteriously erotic stigmatized wounds and tissue-damaged scars. The beauty of having your first crush.

But beauty, as Georges Bataille suggests, 'cannot *act*. It can only be and preserve itself.'[4] It cannot give the imminently possible accident a meaning. It cannot show that the accident is not a defect but 'a property of the system'[5] of progress, of movement, and of speed. And anyway, the accidents that this beauty speaks of in *Crash* are not accidental. They are an affirmation, like the wished-for voluntary death proscribed by Nietzsche: the imperative is to die at the right time.[6] These accidents, then, are desires: desires for what J.G. Ballard has called 'the new sexuality that is born from a perverse technology'.[7] And surely this is a matter not of beauty, but rather of sexuality.

And yet there is little sexuality in the history of the crash. You have to look hard for it. You have to look hard to find out how sexuality got involved with the crash. And here we might say that this hard look, the very process of searching for the history of the crash – car, train, plane, whatever – replicates and plays out the structure of the Trinity at the heart of the discourse of psychoanalysis: symptomatology, aetiology, therapeutics. First we look to the crash site for signs of life, for movement, for survivors. We inspect for damage, for missing limbs, for wounds, lesions and indicators of physiological, neurological or psychological injury. We seek to explain the lost moment of the accident. We search out the black box for unexplained truth. Then we look for causes, explanations, justifications, for who to blame, who to accuse, and for those who should be held accountable, who or what should our recriminations be directed against, and what might their motives or purpose have been. If any. Finally we mourn. We (try, and fail to) overcome loss through a search for, and the manipulation of, memories in the barely optimistic hope that ultimately, as Sigmund Freud so generously anticipated, hysterical misery can be turned into commonplace unhappiness.[8]

This is not sexuality. Rather, it reeks with the singed smell of trauma. And here we are at the door which opens onto the modern world of wound culture. (Etymologically, trauma derives its meanings from the Greek form of the wound, which is *trauma*

traumatos). This wound appears in specific response to the historical, industrial and technological conditions of the modern era, and is tied to the conflictual relations between trauma and mechanical discord, the human body under siege from new labouring machines and changing structures of work, modes of transport, forms of weaponry and styles of warfare, and poisons that encourage its instability. Between the 1860s and 1920 these encounters with extra-human machinery produce always mutating figurations of the wound which undergo significant epistemic shifts, the most important of which is their disappearance, their displacement from the field of the visible to the inexplicable realms of the invisible. That is, they move from a visible, if elusive, topography of organic spinal lesions, caused by what John Eric Erichsen christened 'railway spine' in the 1860s, to the disturbances of the cerebral function, caused by the invisible 'railway brain' of the 1870s. Gradually, such disappearances were also the case in J-M. Charcot's dermographic physiological symptomatologies, or 'body maps', often of male hysterics from the late 1870s to the early 1890s who suffered from disorders caused by the inevitable accidents of industrial production – akin to the German neurologist Hermann Oppenheim's 'traumatic neurosis' – and the nervous disturbances of 'intoxication neurosis' identified by Gilles de la Tourette as the result of lead, mercury and carbon disulphide poisoning in the workplace.[9]

These disappearing signs of injury, the 'problem of the missing lesion' as it was known, testify not to the possibility that victims were unaffected by the trauma, or that the causes of their disorders were invisible as such – that they could not be seen because there were no patho-anatomical determinants – rather, the coordinates of the lost symptoms simply confused the medical fraternity to such an extent that the search was forced to continue elsewhere. This 'elsewhere' dictated that what featured as an 'objective' diagnosis, bearing the wounds and scars of its happening on the surface of the traumatized somatic body, became more of a – and I use this term with great caution – 'subjective', and thus psychological, concern. It therefore became a matter of how the physical shock of trauma triggers or produces the psychical neurosis. For, it was discovered, a long time after the accident, the collision, the shock itself, the trauma returns. (This is what Charcot called the 'period of psychical working-out' [*élaboration*] and what Freud later characterized as 'an interval of incubation'.)

Such is also the case in incidents of 'shell shock', a phrase coined by C.S. Meyers in 1915. Like those with derailed nerve tracks left staggering by the verges of railway lines from the 1860s and before, and the disenfranchised wanderers who populated the wards of the Salpêtrière from the 1870s, so it is for those who littered the battlefields of Europe, the terrain of its satellite skirmishes, and North America from the middle of the nineteenth century to the end

9   See work by John Eric Erichsen, Hermann Oppenheim, Jean-Martin Charcot, and Georges Albert Édouard Brutus Gilles de la Tourette. For an instructive discussion on these matters, see Ursula Link-Heer, ' "Male hysteria": a discourse analysis', *Cultural Critique* (Spring 1990), pp. 207–11.

10 See Martin Stone, 'Shell shock and the psychologists', in W.F. Bynum, Roy Porter and Michael Sheperd (eds), *The Anatomy of Madness: Essays in the History of Psychiatry. Volume II: Institutions and Society* (London and New York: Tavistock Publications, 1985), pp. 242–71.

of World War I. Due in part to the nature of modern industrial warfare, the Taylorized mass-production of weaponry by unskilled workers, the deployment of barely trained 'deskilled' workers, and the fragile ontological condition of modern man, many of the traumatized and incapacitated invalids returning from war suffered from shell shock, or 'war hysteria', brought on and stimulated by explosive circumstances.[10]

The often contagious disorder of shell shock repeatedly lead to a regular confusion over the misdiagnosis of hysterical symptoms. While most victims of shell shock had suffered no organic damage to the central nervous system, soldiers' traumatic memories of combat were treated by physical means. Suggestion was employed to help the patients remember and, obversely, ineffectual distracting techniques were used to help them forget. The patient, now cured, was ready to be sent back out into the field. But, of course, the use of inhuman techniques such as electricity – very different from the seemingly dialogic(al) talking and listening procedures of psychoanalysis – do not stop the cured patient from relapsing, from breaking down again the moment that he next hears the noise of gunfire or exploding shells. As a result of these failures, psychotherapy was turned to as a humanitarian treatment for encouraging the reliving of painful memories. However, British psychotherapy – and the same is largely true for German and Austrian thought at the time – launched an almost wholesale refutation of Freud's sexual aetiology of neurotic disorders, although there was some support for his nonsexual aetiology.

Apart from the work of Freud, there are very few reasons to support the claim that trauma and shock provoked by the accident or crash have anything to do with the coming together of sexuality and death. Within a historical context, at least, this should have profound effects on any confrontation with Cronenberg's *Crash*, and also with those numerous instances in film history when sexuality and death are seen by necessity to meld into this apparently most obvious of couplings. But in Freud these claims are everywhere. It is significant that Freud, then, marks the point at which medical observation of shock as a somatic neurological physicality is found to be insufficient as a diagnostic, thereby giving way to a more proto-psychological, or psychogenic, and decidedly sexual understanding of trauma and its ensuing scars. And it is this shift from the somatic to the psychical that we should heed. For it is a seismic displacement which takes place in his thought, almost imperceptibly, between his first dealings with the trauma of accidents in 1886 – incidentally, around the same year as the appearance of the first roadworthy car, and its first crash – and the publication of 'Beyond the pleasure principle' in 1920, where threads of sexuality and death are intimately interwoven through the anxieties of traumatic neuroses and war neuroses.

How does sexuality emerge from this breach? Before Freud's and

11 Freud discusses how a 'rhythmic mechanical agitation of the body' produces sexual excitation. He mentions this in relation to the movement of carriages and railway travel and how, in later life [due to the repression of adolescent pleasures], this [sexual excitation] leads to travel anxiety, or traumatic neurosis. Freud, *Three Essays*, pp. 120–21. For the early Freud, anxiety, as displaced libido which has failed to discharge through sexual activity, later becomes the very protection against such disturbances of the psyche. See Samuel Weber, 'Appendix A: Beyond anxiety: the witch's letter', in *Return to Freud: Jacques Lacan's Dislocation of Psychoanalysis*, trans. Michael Levine (Cambridge: Cambridge University Press, 1991), pp. 152–67, 154, for further elaborations on this theme.

12 Sigmund Freud, 'Screen memories', *S.E. Vol. III (1893–1899)*, pp. 303–22, 310.

13 See Juliet Mitchell, 'From King Lear to Anna O and beyond: some speculative theses on hysteria and the traditionless self', *The Yale Journal of Criticism*, vol. 5, no. 2 (1992), pp. 91–107, 94.

14 Sigmund Freud, 'Introduction to psycho-analysis and the war neuroses', in *S.E. Vol. XVII (1917–1919)*, pp. 207–10. Freud suggests that in traumatic and war neuroses the ego defends itself from either internal (the libido) or external (violence) threats of damage. A more fully developed and reworked version of this assertion is later echoed by Freud in 'The ego and the id' (1923), in *On Metapsychology* (London: Penguin, 1984), pp. 350–407, where he ties the ego, as the seat of anxiety, to a fear of death, a development of the fear of castration, but only *once the ego has relinquished its* narcissistic libidinal cathexis, given up itself, 'because it feels itself hated and persecuted by the super-ego, instead of loved' (p. 400).

Breuer's 'Preliminary communication' of 1893, sexuality is almost wholly absent from Freud's encounters with that scattering of occurrences known as hysteria. In his writings before 1893, all references to the (usually male) body are encountered through the desexualizing languages of physiology and anatomy, and are still largely tied to Charcot's hereditary aetiology. But in the 'Preliminary Communication', the introduction of a psycho-analysis initiates a move away from the hysterical male figured through a nonsexual symptomatology and towards what will become a highly sexualized configuration of the female hysteric. This move, initiated by a shift from bodily contour to psychical cartography, from man to woman, takes place thanks to Freud's introduction of the notion of memory, or, more precisely, the return of a specific memory, the return of the event which caused the outbreak of hysteria, the psychical trauma. By the time we reach *Studies on Hysteria* two years later, this transition is almost complete. Male hysteria is all but forgotten. And, somehow, through the fabrication of memory as a determinant, discussions of a more or less asexual physiological condition known as male hysteria give way to the beginnings of a more psycho-analytic and highly sexualized talking around hysterical female bodies.

Reminiscences become the precondition for the emergence of sexuality. They are the vehicle for fathering a now wholly sexualized female hysteria. And they still maintain an obligation to shock. The sexual shocks initiating the hysterias of Freud's female patients have been well documented. More elusive are other incidents of shock, including those recounted in Freud's letter to Fliess dated 2 November 1895, where he is finally able to explain how he has managed to substantiate the spurious claims of his seduction theory: *through sexual shock. Other letters to Fliess during the summer of* 1897 repeatedly mention his own neurosis brought on by (memories of) the earlier death of his father, a hysteria compounded by a recent visit to the mediaeval town of Nürnberg, a journey crippled by his newly found travel anxiety.[11] And, similarly, his 'Screen memories' of 1899 centres on a recounting, if not a direct recollection, of infantile railway crash memories.[12] In all cases, the return of a memory is an *a priori*. After all, for Freud, the finding of the lost object is the refinding of it. Although as Jean Laplanche's reformulation of Freud's equation makes clear, the object re-found is not identical with the object lost.[13]

By the time that something vaguely resembling male hysteria does reemerge in Freud's psycho-analysis, it looks very unfamiliar. By 1919, his 'Psycho-analysis and the war neurosis' suggests that there is *no* question that the sexual aetiology, or libido theory, of the neurosis *does not* play a central role in the narcissistic traumatic war neuroses.[14] By 1920, his 'Beyond the pleasure principle' is in no doubt that 'traumatic neurosis' no longer only appears in the great

railway disasters of the late nineteenth century but also as a consequence of the psychological trauma of war. Woven throughout this text, a discussion of traumatic neuroses and war neuroses indicates that both are a consequence of the shock of the accident. For Freud, the neurotic condition is a result of surprise, of fright, of anxiety: conditions which characterize the trauma and both produce and bind an excess of sexual excitation. And here, as one would expect, the compulsion to repeat alludes to how all of this is caught up in the beginnings of a sustained discussion of the death instinct which has, in its service, the pleasure principle.

What becomes apparent in this brief trawl through over thirty years of Freud's thought is that a shift does take place from a nonsexual typography of male hysteria to a sexually specific and sexually differentiated tropology. Male hysteria, although rarely named as such, has fallen headlong into murky relations with sexuality and death. But what brings this shift about? How do sexuality, or pleasure, or unpleasure, and death become such a tangled enigma? Not through the advent of psychoanalysis *per se*. Nor by means of the direct, if fleeting, interferences of memory. Perhaps, though, it is specifically the proximity that these reminiscences might have to the emergence of *castration* within psychoanalysis that precipitates such a knotting.

This union of sexuality and death secured under the shadow cast by castration begins to make clear my attempt at figuring its genealogy through male hysteria. And, indirectly at least, this is something similar to what Barbara Creed does in her article published in *Screen* in 1990 on Cronenberg's *Dead Ringers* (1988).[15] It is exactly this conjunction of sexuality and death, male hysteria and castration, never clarified by Freud himself, which is central to Creed's suggestive argument. But in portraying male hysteria as a defence against the possibility of *symbolic* castration rather than castration anxiety, Creed refers not to (a) lack, but to a loss: to the loss of (the) mother's body, of the breast and of the faeces. Following Kaja Silverman following Lacan, Creed seems to suggest that this inability to distinguish between lack and loss comes about because male anxieties of symbolic castration are usually converted into anxieties about so-called female castration.[16]

But what if this anxiety conversion does not take place? What if the (male) subject does acknowledge the notion of lack prior to the recognition of anatomical sexual difference? And what, most importantly, is at stake in thinking castration not as loss, but as a gain? What does assuming one's own castration and refusing to cover up this inadequacy imply?[17] All I can do here is begin to try to place a necessary wedge between male hysteria and castration anxiety, and between castration and death, in an effort to challenge certain kinds of spectral male uneasiness in and around sexuality which exist and persist, unquestioned, within psychoanalysis, and that

15 Barbara Creed, 'Phallic panic: male hysteria and *Dead Ringers*', *Screen*, vol. 31, no. 2 (1990), pp. 125–46.

16 Ibid., p. 138. Kaja Silverman, *The Acoustic Mirror: the Female Voice in Psychoanalysis and Cinema* (Bloomington and Indianapolis, IN: Indiana University Press, 1988), p. 15, cited in Creed, 'Phallic panic', p. 139. Lacan's theory of sexual identification is already a theory of inadequacy, of castration.

17 Here I am trying to follow closely the still incredibly suggestive approach of Jane Gallop in her *Reading Lacan* (Ithaca, NY and London: Cornell University Press, 1985), p. 20. That Gallop and I begin from differently gendered starting points will of course significantly impact upon both the desire behind, and the effect of, our efforts.

18 Castration is not penidectomy. It would be interesting to consider the implications of this misrecognized misrecognition for Freudian castration anxiety, Creed's symbolic castration, and the repercussions that this difference might have for a psychoanalysis so reliant on the successful completion, and the ensuing effects, of this misrecognition.

19 Elizabeth Grosz, 'ANIMAL SEX: libido as desire and death', in Elizabeth Grosz and Elspeth Probyn (eds), *Sexy Bodies: the Strange Carnalities Of Feminism* (London: Routledge, 1995), pp. 278–99. For another fascinating reading of Freud's 'Beyond the pleasure principle', see Suhail Malik, 'Castrating. Inventing. Death', in Joanne Morra, Mark Robson and Marq Smith (eds), *The Limits of Death* (MUP, forthcoming 1999).

20 Grosz, 'ANIMAL SEX, p. 289.

21 Ibid., p. 293.

22 Ibid., p. 291.

23 Lynne Kirby, 'Male hysteria and early cinema', *Camera Obscura*, no. 17 (1988), pp. 112–31.

24 Grant, 'Crimes of the future', p. 183.

are particular to it.[18] I will approach this by turning to another role that sexual pleasure might play in the discourse of psychoanalysis. But not before a final effort at putting this sex/death union to rest. To this end, I refer to Elizabeth Grosz's 'ANIMAL SEX: libido as desire and death'[19] in which Grosz – following Roger Caillois's and Alphonso Lingis's explorations of the persistence of the link between desire and death, and sexual pleasure and death – proposes that there is an urgent need to dissemble or sever the relations between sexuality and death because, apart from the damage that this bonding has done to female (and male) sexuality, and potentially within gay communities, these relations are not determined in advance. That is, they are not determined by figuring 'erotogenic zones as nostalgic reminiscences of a pre-oedipal, infantile bodily organization . . . of seeing the multiplicity of libidinal sites in terms of regression'.[20] Grosz is against the need for sexuality to compensate for the inevitability of death, against the sexual encounter as only or necessarily an adventuring (orgasm) driven compulsion, against what she calls a fantasy of 'the hydraulics of the Freudian model of sexual discharge or cathexis'.[21] Rather, in proposing a materialist account of sexual desire which favours entire surfaces of bodies as series of erotogenic zones, sites of provocations coming together to contaminate and intensify their contiguous and disparate others, where the points of mutual interaction and intensification may come from different bodies, things, substances, the sexual encounter becomes 'a directionless mobilization of excitations with no guaranteed outcomes'.[22]

As Lynne Kirby implies in her account of the historical birth of cinema in the Golden Age of railway travel, it might be seen to be this compulsive structure of Freud's hydraulic sexuality that suggests both the narrative imperative of early moving pictures and the speeding urgency of the train, as they simultaneously hurtle towards their climactic finale (*le petit mort*) of shock as trauma.[23] Michael Grant's 'Crimes of the future' makes a similar point through Vaughan, the tragedian of *Crash*, who suggests that the car crash should be seen as 'fertilizing'.[24] But unlike the logic of loss at the hub of this hydraulic sexuality, Grosz's productive coming together of parts of bodies, things and substances figures an erotic desire which is always in superabundance, in excess, superfluous. For Grosz, materiality is 'always in excess of function or goal'. For me it is always something less. And perhaps it is what lies in-between this 'always in excess' and surreptitious understatement that is the thing which distinguishes *Crash* from just any other road, or rail, movie.

The structure of *Crash*, both as an imaginative space of conjecturality and as a site for the playing out of sexual encounters, is unlike more familiar road movies. The banality of its narrative drive fails to direct us towards anything other than a disappointing

and unresolved denouement. Its geography refuses the simple pleasures of an exploratory narrative unfolding and, instead, offers a rhizomatic network of road systems leading to nowhere in particular. The crashes which take place on these roads to nowhere are themselves rarely accidental, but their outcome is never determined in advance. By necessity, these conditions generate, and are produced by, a different order of sexual contact which must come into play, one that is proper to these new assemblages of human relations. This contact occurs, and takes the form of an offer of both explicit and discreet instances of touching between human and extra-human bodies, bodily parts, things and surfaces. Some of these instances confer a different manner of sexuality; others imply a nonsexual intimacy.

This takes us a long way from Barbara Creed's 'Anal wounds, metallic kisses', where she reaffirms what we, as subjects, are already supposed to know: that a viewing of Cronenberg's *Crash* will reaffirm the strong, already existing connection between desire, sex and accidental death. And we know this because the film's violent dissembling and disarticulating experience of such a crash culture is so appropriate to us, to the postmodern desiring subject. But her account of our ontological condition, while questionable, is neither here nor there. And, incidentally, if anything, Fred Botting's and Scott Wilson's 'Automatic lover' proposes a much more empathetic understanding of where the sexualized subjects in *Crash* come from, and also, perhaps, how the extent to which the incomplete formation of the subject through the identificatory viewing strategies of a restrictive psychoanalysis cannot fail to replicate the pleasures of these characters. From Creed, caught, much like the characters, in Freud's restricted sexual economy, we should not be surprised to discover that Cronenberg's approach to questions of sexual difference does little more than replicate a series of already familiar themes around the subject's formation through its relations with technology, the eroticization and fetishization of its already overdetermined wounds, and that this wound culture is primarily concerned with a male desire still shackled to a fear of the female body. Not unexpectedly, the erotic encounters in *Crash* are seen to play out this male desire through displacement onto women's bodies, and to repeat a long-standing failure to engage with female desire, thus confirming the film's phallocentric sexual politics.

These customary remarks notwithstanding, Creed's most important observation is that 'none of the characters, no matter how resourceful in their pursuit of the erotic, will ever find fulfilment'.[25] This incapacity to realize fulfilment is echoed by Grant, who sees Cronenberg's *Crash* emerge from the tradition of romantic art which is embodied in the necessary provocation and failure of spiritual life, the same spiritual life that J.G. Ballard sees played out in the 'sacramental aspect' of the car crash in Cronenberg's film. And this

25 Creed, 'Anal wounds', p. 176.

26 Ibid., p. 175.

27 Ibid., p. 175.

28 Paraphrasing is too generous a word to describe what I am doing to Jean-Luc Nancy's sharp observations. See Jean-Luc Nancy, *The Birth to Presence*, trans. Brian Holmes et al. (Stanford, CT: Stanford University Press), pp. 380–1.

29 Sigmund Freud, *Jokes and their Relation to the Unconscious*, trans. James Strachey (London: Penguin, 1991), p. 188.

30 Freud, *Three Essays*, p. 130.

31 Ibid., p. 132.

32 Ibid., p. 132.

33 Ibid., p. 62.

34 In *Three Essays*, Freud continues to use train travel, and the space of the carriage, as an example of the sexualization of movement, for this very reason necessarily leading to travel anxiety in later life. Ibid., p. 120. See also p. 101.

35 Ibid., p. 62.

competing structure of provocation and failure is very much in keeping with what Creed calls the films 'perverse subject-matter',[26] although not necessarily in the way in which she might mean. Given the film's perverse subject matter, she says that it is 'unexpectedly detached',[27] a point also made by Grant who gestures towards Cronenberg's coldness, artifice and dispassion of style. But this perverse detachment should not surprise us, given what Freud has to say about the nature of perversions.

In keeping with the colourful language within which *Crash* has been discussed by others, to find out just what Freud has to say about the nature of perversions it might be useful to return to the consideration of smut that appears half-way through his book on jokes. For Freud, the production of smut is about the production of pleasure through sexual exposure. And for sexual exposure to take place successfully in his smut scene, the practice of touching must be replaced by the act of looking. This pleasure, which remains so mysterious to him, is the pleasure of desire, and is discovered for the first time in the region of laughter. For him, laughter is, in fact, the first form assumed by what he calls 'fore-pleasure'.[28] Fore-pleasure is an interesting thing. In Freud's hands, it is the thing which 'serves to initiate the large release of pleasure',[29] that would arouse sexual excitation and demand to know how pleasure can become greater,[30] that will go on to satisfy desire through the sexual act proper, or what he calls 'end-pleasure'. But a problem arises for Freud when fore-pleasure endangers the attainment of the normal sexual aim: if an interest in fore-pleasure becomes too great, and its motivation so strong that the will to proceed is curtailed and disappears.[31] Fore-pleasure, previously a precipitous act, takes the place of the normal sexual aim. It cannot become end-pleasure and is, instead, practised for its own sake or 'without a purpose', as Freud warns discouragingly.[32] Persisting with our language of travel, Freud indicates that the pleasures of touching and looking 'lie on the road towards copulation',[33] until their station as fore-pleasures is fully revealed.[34] Once this realization takes place, we are in the presence of the emergence of perversions. This is how Freud describes perversions here: 'Perversions are sexual activities which either *extend*, in an anatomical sense, beyond the regions of the body that are designed for sexual union, or *linger* over the intermediate relations to the sexual object which should normally be traversed rapidly on the path towards the final sexual aim'.[35]

Against a Freudian hydraulics of sexuality which seems to necessitate that *Crash* be interpreted, favourably or otherwise, through the violence of vaginal and anal penetration and its reproductive (or 'creative') imperatives, I am interested in the perversion of touching as fore-pleasure. I am intrigued by how Cronenberg's film also offers numerous touching encounters, extended lingerings which conjure up a landscape of intermediate,

36 In *Three Essays*, Freud points to Moll's discussion of 'contrectation', the need for contact with the skin, see p. 84, n. 2. A footnote added in 1915 suggests that Freud is now happier to 'ascribe the quality of erotogenicity to all parts of the body and to all the internal organs' (p. 100, n. 1). .

37 Many of these emotive suggestions have been borrowed from Grosz.

38 I would hope that this small gift of fore-pleasure can be offered with impunity, and that it amounts to something more than a severe, perhaps terminal, case of wound envy on my part.

non-genital, non-predetermined regions of the human and machinic body, and the deftness of the touch that lingers on their skin as it suggests and welcomes stimuli.[36]

This erotogenics speaks of earlier sensations that might have snaked their way across the perilous hysterogenic zones of Charcot's male hysterics, had they been allowed to flourish. But they were not. Touching was made to disappear. The dominance of psychoanalysis eclipsed this sensuality. But this need not continue to be the case. Just because psychoanalysis has so much difficulty engaging with anything that is not always and already made to be about sexuality, this does not mean that figures caught in its petrifying grip, such as touching, have to continue to disappear into its grammatology simply because they have been on speaking terms with it for so long. It is tempting to suggest that touching might not be just about sexuality. If it is, it is a largely unexplored, unknown and secret language of contagious intensifications and contaminations across or between bodily and other surfaces and substances, a coanimation of provocations and reactions, a conjunction of charged caresses which have frequently lain dormant since the beginning of this century.[37] Touching can become a sexual encounter with itself. If touching is about sexuality, it might be about forepleasure. And if it is about forepleasure, it might not necessarily even be sexual.

David Cronenberg's *Crash* tries to play with the idea of forepleasure. At its worst, the film draws attention to its inability to escape from a crude and contrived Freudianesque model of sexuality. But at its best, it offers innumerable touching opportunities and encounters. More often than not, this touching is an encouragement to something else: to genital and anal sexuality. But sometimes this touching is no more than simply touching. Its aim is still to produce pleasure, and it can still be sexual, but it swerves away from the *a priori* compulsion that is the futile finality of hydraulic sexuality for Freud. At these moments, it fails to satisfy (the knowledge of) Desire and, instead, responds to a desire that has only ever been glimpsed. This touching is, in Freud's own words, a perversion. Following Paul Virilio's words extracted in my epigraph, I would rather think of it as a fore-pleasure leading to nowhere.[38]

debate:

No mas Habermas, or ... rethinking Cuban cinema in the 1990s

JOHN HESS

1 Oscar Quiros, 'Critical mass of Cuban cinema: art as the vanguard of society', *Screen*, vol. 37, no. 3 (1996), pp. 279–93; Catherine Davies, 'Modernity, masculinity and Imperfect Cinema in Cuba', *Screen*, vol. 38, no. 4 (1997), pp. 345–59.

Screen recently published two problematic articles on Cuban cinema.[1] From different moments in Cuban filmmaking each writer selects certain films to call 'Marxist', because they critique the Cuban Revolution. Davies likes the avant-garde, disjunctive, formally experimental films that the Cubans made in the 1960s and early 1970s. Quirós favours the more conventional 1980s films. While these scholars argue strongly for antagonist aesthetic visions, they both take bourgeois aesthetic approaches and oppose the historical reality of the Cuban Revolution.

Using the same essay by the German philosopher, Habermas, they argue that the aesthetic they prefer represents the greatest freedom, because through certain forms, and not others, their favoured filmmakers take up a position most distant from and most critical of Cuban 'authority' or state power. Art triumphs over economics and politics!

Sara Gómez's *One Way or Another* (1974–7), represents Davies's approved aesthetic: Imperfect Cinema. Because the film 'challenges traditional patriarchal ideology as well as socialist ideology by consistently breaking down any attempt to provide a pleasurable resolution', it exemplifies 'deconstructive feminist countercinema released from the stranglehold of the Polity and the Economy through Art' (p. 358). Quirós praises two costume dramas (*Amada*

[Humberto Solás, 1983] and *La Bella del Alhambra* [Enrique Pineda Barnet, 1989]), and Gutiérrez Alea's sentimental *Cartas del Parque* (1988). Calling them Perfect Cinema, Quirós argues that their 'aesthetic qualities suggest that the sphere of Art is not aligned with the official orthodox ideology of the Cuban Polity. Indeed, Perfect Cinema proves that the sphere of Art can maintain its relative independence within the Cuban social whole' (p. 287).

Davies misunderstands the extent to which Sara Gómez made a film that actively supports specific projects of the Cuban Revolution, including urban renewal and the fight against machismo. Between the 1974 completion of the film and its release in 1977, Cuba passed the Family Law, embarked on a serious programme of sex education, and began to deal with homosexuality in a more positive way.[2] Quirós misunderstands the possible range of socialist art and particularly the extent to which economic globalization has affected Cuban filmmaking. From the mid 1980s on, without the capital needed to make films that could compete on the world market, Cuba has had to resort to coproductions with European television and others to finance films. Increasingly it must make films that appeal to a generalized international audience.

Reading Davies's article, one wonders why she ignores Julia Lesage's analysis of *One Way or Another*.[3] Contrary to Davies, Lesage finds the film dialectical, revolutionary and feminist in the way that it expresses and integrates into its very fabric the utopian project of the Cuban Revolution. Had Davies read this article, or watched the film more closely, she could have avoided some obvious mistakes. Mario is mulatto and did not become a *ñáñigo*; his buddy, Humberto, does not apologize to his fellow workers and the wrecking ball does not knock down the homes of the wealthy. She savages the character/'real person' Guillermo Diaz, finding him no model for young men because he is emasculated, overweight and sings in a high-pitched voice about the hypocrisy of women. Aside from its homophobic stereotype, this characterization is ludicrous. Guillermo is a model for Mario, and his song, repeated at the end of the film, does not concern the hypocrisy of women but that of the marginal world the film and Guillermo encourage Mario to leave.

Davies compares *One Way or Another* to Gutiérrez Alea's *Up to a Point*; the Imperfect style and challenge to Cuba's socialist ideology of the first make it vastly superior to the latter's conventional style and confirmation of the revolution. Davies, however, says nothing about race, although both films are embedded in a racialized visual discourse. In Gómez's film we see the Cuban revolution uprooting and changing an economically and socially marginal culture, figured as mostly black, in order to integrate it into the larger Cuban society. *Up to a Point* seems quite complex and contradictory in terms of race. Though the film shows a radical divide between the white elite and the mostly black workforce on the docks, this workforce creates

2 See both Marvin Leiner, *Sexual Politics in Cuba* (Boulder, CO: Westview Press, 1994) and Ian Lumsden, *Machos, Maricones and Gays* (Philadelphia, PA: Temple University Press, 1996).

3 Julia Lesage, '*One Way or Another*: dialectical, revolutionary, feminist', *Jump Cut*, no. 20 (May 1979), pp. 20–23.

the pressure for change in Oscar. Its active involvement in the revolution, in the struggle for change in the economy and in itself, and its ability to articulate that in the taped interviews, undermine Oscar's prejudicial and ignorant notions and destroy his film project. This film sharply criticizes Cuba's artistic elite. Davies argues further that these two films 'deal with the psychosexual effects of social and economic change on men and women' (p. 347), but she misses how these characters participate in these changes and how this very involvement transforms them. Davies praises how Mario flaunts his masculinity and resists 'both cultural assimilation to, and castration by, (state) authority' (p. 355). She sets up a binary opposition between Mario's manhood and a state authority bent on destroying it. Certainly Yolanda, as well as his parents and some coworkers, question Mario's self-conception by pressuring him to change and give up his machismo. But to see this as a fundamental threat to his ego, a castration threat, misunderstands the whole notion of social change the film expresses.

> Julia Lesage talks about the complex representation of change in the film. Criticism, art, work, social participation, and love are all shown in the film as avenues to new understandings. Characters interact with each other and influence each other profoundly. The film shows how on a deeply personal level, the Cuban revolution has demanded that people struggle against alienation, false consciousness, and old compulsive ways. As political contradictions are worked out by the characters in the film, the domestic and personal sphere is revealed as a place where individuals struggle to know what they want, and this struggle is always incomplete.[4]

4 Ibid., p. 22.

Contrary to castration, the Revolution offers Mario the opportunity to become a whole person, a man able to sustain emotional relationships with both men and women while carrying out his responsibilities to the collective – a collective which in turn supports him.

That the Cuban revolution has not turned out the way many inside and outside Cuba hoped it would does not invalidate the utopian effort it represents nor the gains it has made and now struggles under incredible odds to maintain. Sara Gómez ardently supported that utopian project and her film stands as one of its finest artistic contributions.

Oscar Quirós does not closely examine films, but tells a curious version of Cuban film history. In the 1960s, he says, Cuban cinema laboured under the heavy weight of an official Marxist-Leninist orthodoxy. The cultural bureaucracy imposed a narrow aesthetic formula, called Imperfect Cinema, consisting of 'the use of "type" characters, harsh imagery made by scratches, under/over exposure, high contrast, excessive movements of the camera, presentation of

historical events and the wide use of hand-held camera' (p. 280). (Were he right, this would represent the first time a Communist Party imposed avant-garde forms on its artists.) Quirós claims further that after the Padilla affair in 1971, the government was forced to reassess its cultural policies and 'the artistic environment began to improve' (p. 283). These changes made way for Perfect Cinema, 'defined by the lack of the devices used by Imperfect Cinema, or any other imposed aesthetic formulae' (p. 280).

He misunderstands both ends of this story. The 1960s represent a period of open and often angry struggle over socialist art in Cuba. ICAIC became an important centre of opposition to any effort to impose socialist realism on Cuban cinema. Its primary leaders were long-time Communists – such as Alfredo Guevara, Santiago Alvarez, Julio Garc'a Espinosa, José Massip, and Manuel Octavio Gómez – who were activists in the pre-revolutionary Party-dominated arts organization, Nuestro Tiempo. Thus ICAIC's fight for artistic freedom in the 1960s was a struggle between and amongst Marxists and Communists, not an effort by some Marxist-Leninist orthodoxy to impose a formula on naive or passive artists. The increasing isolation of Cuba in the later 1960s, the loss of Che in Bolivia, the failure of the ten-million-ton sugar harvest in 1970, deepening economic difficulties, the growing dependence on the Soviet Union for resources, the spreading counterrevolution in Latin America, and ongoing US hostility brought a close to this open debate by the end of the 1960s, marked by the First Congress on Education and Culture (1971).

By all other accounts, the early 1970s was a period of re-evaluation and artistic decline: 'Elitism and manifestations of artistic privilege', writes Julianne Burton, 'were rejected in favor of an attempt to define and produce a genuine people's culture'.[5] In 1976, the new Ministry of Culture absorbed ICAIC, representing 'the symbolic loss of the privileged autonomy the Institute had enjoyed since its founding'.[6] In 1983, Julio García Espinosa replaced Alfredo Guevara as director and embarked on a programme to increase productivity and quality. This renewal soon ran into growing economic difficulty. The world market for cinema began to change in a way to disfavour the kinds of films Cuba was making, and the Cuban internal market could not support purely national filmmaking. Because the Cuban peso has no value outside Cuba, everyone, including the state, needs dollars to survive, and all of Cuba – its beaches, artists, scientists, rum and cigars, and most tragically many of its young women – must prostitute itself to 'tourists' and foreign capitalists in order to survive.

Quirós sees this latter period as opening up to 'Perfect Cinema' which 'had the freedom to employ all the aesthetic possibilities the medium can offer without having to resort to particular formulae. Its aesthetic qualities suggest that the sphere of Art is not aligned with

5 Julianne Burton, 'Film and revolution in Cuba: the first twenty-five years', in Saunder Halibsky and John M. Kirk (eds), *Cuba: Twenty-Five Years of Revolution, 1959–1984* (New York: Praeger, 1985), p. 144.
6 Ibid.

the official orthodox ideology of the Cuban Polity' (p. 287). When Quirós talks about formulae, he mostly discusses the use of 'types' instead of 'rounded characters', and of subordinating drama to some sort of political purpose. These seem more matters of aesthetic politics, of how the Cubans conceive the social function of cinema and its relationship to an audience – issues Quirós and Davies both ignore.

Quirós likes *Amada*, because it 'does not appear to serve any particular political purpose' (p. 286). The lead characters in *La Bella del Alhambra* 'are provided with greater dimensionality than the "types" of Imperfect Cinema' (p. 287). Quirós praises the mise-en-scene of these films, harking back to the auteurism and mise-en-scene criticism of the 1960s, before the advent of semiology and structuralism. However, he seems unaware that much of his description of *Amada*'s elaborate mise-en-scene would fit many other Solás films, from *Hombre de Exito* (1986) back through *Cecilia* (1981), and all the way back to *Lucia* (1968) – even, to some extent, the 'oppressive mood' and 'brooding interiority' (p. 286).

One of the most striking characteristics of Cuban cinema is its eclecticism. Finding two or three films across nearly 40 years of ICAIC filmmaking that seem stylistically similar proves quite difficult. One finds, however, a relative consistency of themes across these years: Cuban history, underdevelopment, consciousness and ethics, machismo and the family. The dialectical relationship between the social and material world, on the one hand, and individual consciousness, on the other, has dominated Cuban cinema from the most optimistic, utopian films of the 1960s to the more conventional and pessimistic films of the 1990s. Cuban filmmakers have used every imaginable technique to represent this relationship and the struggles that arise from it, including criticism of many aspects of the Revolution. This is why Cuban films continue to fascinate viewers in Cuba and abroad.

debate:

Reply to John Hess

CATHERINE DAVIES

Meaning is context-bound, so intentions do not in fact suffice to determine meaning; context must be mobilized. But context is boundless, so accounts of context never provide full determinations of meaning.[1]

1   Jonathan Culler, *On Deconstruction: Theory and Criticism after Structuralism* (London: Routledge and Kegan Paul, London, 1982) p. 128.

I welcome the opportunity to reply to John Hess. First, I am sympathetic to the Cuban Revolution and its utopian project – that is why I spend my time thinking about it; secondly, Hess's readings of the films are perfectly acceptable, though rather obvious; thirdly, I concur with his criticism of Quirós (my reason for writing in the first place). I am perfectly aware of Gómez's active participation in the Cuban Revolution and, of course, I am familiar with Julia Lesage's article on *One Way or Another*,[2] also referred to extensively by E. Ann Kaplan.[3]

2   Julia Lesage, 'One Way or Another: dialectical, revolutionary, feminist', *Jump Cut*, no. 20 (May 1979), pp. 20–23
3   E. Ann Kaplan, *Women in Film* (London and New York: Routledge, 1983).

So, where is the problem? Surely Hess is not suggesting that Lesage's reading, intelligent though it is, is the only possible – the only 'correct' – reading? For Lesage, the film is an example of Marxist dialectical thinking, structurally and thematically. Who can dispute that? It is, of course. But why repeat arguments already made some twenty years ago? My intention, as I clearly indicated, was to contest Quirós on his own grounds (with reference to Habermas's theories on the function of art), and to favourably compare the more complex *One Way or Another* with the more 'Perfect' *Up to a Point*. I do not deny other readings of these films, Marxist or otherwise, but

4 Screen editors, *The Sexual
   Subject: a Screen Reader in
   Sexuality* (London and New York:
   Routledge, 1992).
5 Lesage, '*One Way or Another*',
   p. 22.

for me (and surely I am allowed to read the film as I see fit), the most interesting feature of *One Way or Another* is its representation of the psychosexual effects of revolutionary ideology. I focus on this from a broadly post-Lacanian perspective of the subject and sexual identity, a good introduction to which is *Screen*'s own *The Sexual Subject*.[4]

In Gómez's film it is clear that Mario is having a hard time. As Lesage points out, he is confused and exclaims to his father 'I'm all messed up'.[5] The point is, why is he 'messed up'? Why is male bonding so important to him? Why does he feel so threatened by the new way of thinking? Why did he closely identify with Abakuá? Why does he find it difficult to leave the marginal world? These are crucially important questions which need to be understood in terms of identity formation.

There is no doubt that the film, as an autonomous text (that is, not Gómez or Gutiérrez Alea, but the film itself), points up the ambiguities and contradictions of a revolutionary ideology that, on the one hand, is seen to conceptualize masculinity in terms of nationalist heroism and, on the other, is seen to demand the demolition of this identification in favour of values associated with the 'new man'. The film itself presents images of masculinity inextricably tied up with popular notions of the formation of a national cultural identity, including the struggle for independence, and asks: What happens when these constituent elements are prised apart? Is it a feminist film in that the revolutionary values are voiced and represented by a woman? These contradictions are no less significant with respect to race than to gender and sexuality. The Abakuá cult was a powerful anti-colonial force and a vehicle for the creation of a version of Cuban black identity; the film asks what its place is in the new order. Pointedly, however, the film does not answer any of these questions unequivocally. Neither Mario or Yolanda, nor even the authoritarian voiceover, convince entirely. This is the beauty of the film: it consistently deconstructs itself and the resulting play of signification still captivates the attention of viewers today. To suggest that there is only one possible reading does neither the film nor the Cuban film industry any favours.

I shall now address Hess's specific criticisms. I refer to Mario as black and mulatto ('poorly educated mulatto' [p. 354]) to emphasize the black/white, male/female contrasts set up in the film; certainly, Mario did not become a *ñáñigo* but stated he would have liked to have become one – his close identification with the cult still stands. In my view, Humberto's self-justification and (feigned) contrition when explaining his absence to fellow workers amounts to an apology (taking into consideration, of course, the modes of behaviour permitted by prevalent codes of masculinity). The buildings which the film presents in various stages of demolition include hovels and slums but also examples of colonial architecture often inhabited by

middle-class families in the nineteenth century (as is the case in most major European cities). I am surprised that Hess identifies a high-pitched voice and being overweight with a homophobic stereotype. There is no suggestion in the film, or in my reading of it, that Guillermo Díaz is gay. He is shown in the film to represent a model for Mario, a model of the new man who has left the marginal scene. It is not that I don't find Guillermo to be a model for young men; it is the film that does not present him as such. What Guillermo represents clearly does not match up to traditional stereotypes and fantasies of Cuban masculinity. In this sense he is no model for Mario because his representation does not solve the tension set up in the film between revolutionary ideals and masculinity. My reference to 'emasculation' supposes familiarity with the castration complex, in particular castration anxiety. I do not praise Mario for flaunting his masculinity, I merely state a fact. Yolanda makes the same point in the film when she mimics his strutting.

The song that Guillermo sings is intriguing to say the least, and I will take this opportunity to elaborate on it. Clearly, as Hess states, the song is meant to persuade Mario to leave the old ways. It is a lyrical version of Guillermo's advice to Mario during a previous conversation in which Mario tells him about his problems with Yolanda. The first three lines of the song roughly translate as 'Get rid of that world that gives you nothing, where there's no morning flower, just railings and hardly a window'. But the following lines make a sudden switch (inexplicable, if it were not for the presence of Yolanda) in order to introduce a 'she': 'And make sure she never finds out, about the things that happened and your struggle in the dawn'. In other words, the song invites the man not to tell the women about his past, not to be sincere. The second verse hinges entirely on the potential treachery of woman: 'And if she shows you a picture of another world full of lies, and if when you look into her eyes you see she avoids you, and doesn't look you straight in the eye, then get rid of her too, for her hypocrisy'. It seems to me, close reader of the text that I am, that what we have here is rather more than a simple invitation to leave a marginal society. For a start, the song praises the sincere (revolutionary) woman, but not the sincere man; it associates low-life, betrayal and possible degradation with womanhood; more importantly, for me, it voices the kind of castration anxiety Mario is shown to experience throughout the film.

The ambiguity of the song is encapsulated in its title: the imperative *Véndele*. *Vender* may mean here to get rid of, sell out, betray; *le* may mean it, her or him. In fact, Mario himself is not sure what Guillermo is referring to and asks, in the conversation, 'Get rid of what? Yolanda?'. Guillermo replies, 'No, the scene [*el ambiente*]'. In short, the song presents yet another instance of playful signification. To underestimate the film's potential in this respect, to

foreclose on interpretation, to impose one reading is to do it a great disservice.

Finally, as I state in my article, I find Gómez's film the more revolutionary of the two because, no matter where we view it, it still has the power to make us think, not just about Cuba, not just about revolution, but about the fundamental contradictions in the way we make sense of the world. This does not mean that I do not recognize the value of *Up to a Point*. Many aspects of this film deserve further consideration, including race issues, as Hess suggests. But it is a film which has elicited much critical attention already, and space precludes further discussion. Gutiérrez Alea is without doubt the most important and prestigious Cuban filmmaker to date. It is to his credit that when finishing Sara Gómez's film he did not smooth off its rough edges, impose a particular view, or forcibly resolve its open-ended debate. Unlike others, he had confidence in the power of the film as an art form in its own right.

reports

**Culture Shocks: The Future of Culture.
Wellington, New Zealand, 10–12 July 1998**

**Pacific Spaces/Global Marketplaces: Cultural
Studies in Pacific Contexts. Wellington,
New Zealand, 13–14 July 1998**

As a New Zealander studying in the USA, I
was interested to return to my home country
to attend a pair of events – a conference and
a 'symposium' – which were concerned with
the role of cultural studies in a 'Pacific'
context. Having spent a number of years
reading cultural studies texts which focused
largely on the experiences of Britain and the
USA, I was excited to see how the
reorientation of cultural studies to a New
Zealand or South Pacific context might open
up new questions and enrich my
understanding of both my country of origin
and of cultural studies.

As it turned out, I did learn a lot from the
two events, but not in quite the way I had
anticipated. I came away from these
conferences with a new appreciation for the
concept of 'travelling theory'. I had always
regarded the phrase as dealing with the rather
unremarkable observation that the meaning
and utility of theory necessarily changes
according to where, when, who or what is the
object or subject of study. Only after seeing
theory and theorists travel the long
geographic, but (I naively thought) rather
short cultural, distance to New Zealand, did I
realize the vital importance of understanding
how theories travel. There were many
interesting presentations and papers concerned
with the role of cultural studies in a
'globalizing' world that touched at least
tangentially upon the idea of travelling theory
and which were valuable in their own right.
But it was really over the whole five days of
Culture Shocks and Pacific Spaces, and in the
relationship between various sessions and the

interplay between presenters and audience,
that recurrent themes emerged and the unique
flavour and meaning of the two events
became apparent.

The scene was set by the Culture Shocks:
the Future of Culture symposium, which
promised to deviate from standard conference
tone and format. The quintessentially
meaningless second part of the symposium's
title hinted at its rather grandiose ambitions
and the accompanying likelihood that it
would fail to achieve them. In fact, it became
an unfortunate trademark of many of the
presentations that the first ten minutes of each
talk tended to consist of a disclaimer that the
speaker had very little idea of what they were
supposed to be talking about – session titles
like 'When is the Past Past?' and 'Where is
Culture?' tended to make the audience
sympathetic to the speakers' quandaries.
Matters were not helped by the fact that the
quite impressive list of international speakers
scheduled to attend was depleted by the
unfortunate absence of Stuart Hall from
Britain, Tricia Rose from the USA, and
Marian Pastor Roces from the Philippines,
among others. One lesson the organizers, an
uneasy conglomeration of academic, museum,
and professional conference types, soon
learned was that theories often travel more
easily than theorists.

Nonetheless, Culture Shocks certainly lived
up to its promise of breaking the conference
mould in some respects, at least. Held in New
Zealand's new national museum, Te Papa,
many of those attending were not academics,
and the mix of artists, writers, musicians and
scholars, though at times uneasy, was often
refreshing. The symposium definitely
benefited from the screening of a number of
local short films and videos in between
speakers, and the integration of various other
types of performance. I am not sure that
Andrew Ross expected when chairing a panel
intriguingly entitled 'Cocktails and
Hangovers' that it would involve participating
in Maori action songs, but it was moments

like this that highlighted the symposium's active demonstration of the interaction between the global and the local.

In terms of the talks themselves, there tended to be something of a disjuncture between the local speakers' tendency to celebrate the uniqueness and the vibrancy of New Zealand culture, and many of the overseas speakers' concerns, which were more obviously coming from an established cultural studies tradition centred on the USA and Britain. Thus, the opening address by New York journalist and author Douglas Rushkoff on the future of the World Wide Web and other related technology, though quite well-received, seemed strangely irrelevant to local concerns. Rushkoff's talk was entertaining and well argued, and appeared global in its concerns for the future of communications technologies, but its derision of *Wired* magazine, Microsoft and the post-suburban atomization of modern life did not have the same immediacy for the New Zealand audience as it would have had for an American crowd. Ironically, Rushkoff's presentation, like a number of others by international presenters, failed to really connect with the concerns of local participants because he was concerned with a different local, expressing his view of what was important from the perspective of a techno-hip New York journalist.

Rather than the corporate takeover of technology and communication, the issues that turned out to be central for the Culture Shocks symposium tended to be specifically related to questions of national identity, especially from the perspective of race. For most New Zealanders at the event, the word 'culture' instantly sparked discussion or debate of the Treaty of Waitangi, the nineteenth-century agreement between the British Crown and various Maori tribes that has been a source of controversy over land rights and Maori access to power in general ever since. The host venue, Te Papa, with its hi-tech renderings of the meeting of cultures

in New Zealand, is in many ways a massive monument to New Zealanders' anxiety over who they are and how their culture should be defined. It is arguable that there has been a complex cultural shift over the last twenty or so years in New Zealand towards the construction of a multicultural 'Pacific' identity, and away from the old identification with the British Empire. In this context, an overwhelming majority of local speakers and presenters was concerned with issues of national and racial identity. From rap vocalist Dean Hapeta of the Upper Hutt Posse – who presented his band's new video, which incorporated traditional Maori iconography and concerns about the effect of industrial pollution on the environment – to Auckland University anthropology professor, Anne Salmond – who talked about her family's historical relationship with Maori culture – to former Maori activist, now libertarian Member of Parliament, Donna Awatere-Huata – talking about her road from a tiny Maori community to a seat in government – the concerns of most of the local speakers were, not surprisingly, very local. New Zealand identity and race relations were front and centre, rather than overtly global concerns.

It was quite telling that the one overseas speaker at Culture Shocks who probably connected best with the audience was Australian Meaghan Morris. Speaking about the intellectual response to Australia's disturbingly popular nativist political movement 'One Nation', Morris spoke of her own difficulty in understanding the vehement racism of many of her compatriots and of formulating a response to it. The reason her talk seemed to resonate with the audience was not because she was describing an Australian cultural situation identical to that of New Zealand, but because many of the issues were similar: the anxiety felt by many white Australians over their own identity due to a combination of the politicization of the Aboriginal peoples; increasing immigration from Asia; the growing gap between rich and

poor whites. These cultural, racial and social problems are the products of a complex interaction of both global and local developments. But the increasing influence of large multinational corporations over global culture which shaped the concerns of Rushkoff and others, while undoubtedly of vital importance, seems less pressing to New Zealanders than the local issues of race and nation which Morris discussed in their Australian context.

The Pacific Spaces/Global Marketplaces conference which followed Culture Shocks was less awkward about what the audience expected and what some of the speakers delivered. More purely academic both in terms of those attending and in its format, Pacific Spaces still had a wide variety of concerns – from the meaning of James Bond in a postcolonial world, to the making of gay and lesbian communities in twentieth-century New Zealand – but somehow the language and the rhythm of the conference were more predictable. The last session, 'Towards the Development of Cultural Studies in New Zealand', revealed nothing particularly new – it consisted of the by-now rather predictable agonizing over 'What IS Cultural Studies?', and the de rigeur conclusion that it is a multifaceted endeavour that cannot, and should not, be confined within strictly disciplinary boundaries.

For me, however, the two events were useful in starkly illuminating some of the limitations and possibilities of cultural studies. One of the main limitations is that despite all the rhetoric within and outside academia about the process of globalization, we still have a long way to go before we understand it – and for most people, including academics, their experiences and concerns are still overwhelmingly shaped by the local. These conferences made clear the difficulties inherent in reconciling our desire to understand culture on a global level, and at the same time celebrate the diversity of local cultures. The disjuncture between these

impulses was at times glaringly apparent, but this kind of awkwardness is to be expected from an academic field (if one can call cultural studies that) that is still finding its feet. Hopefully, as these types of conferences occur more often and in a wider variety of locations, the travel will season cultural studies and make it more useful for understanding 'culture' in all its global and local forms.

Jim Welch

The Second International Transgender Film and Video Festival. The Lux Cinema, London, 24–27 September 1998

What and who is transgendered? Consequently what makes a movie 'transgender'? In the wake of hyper-exaggerated tranny-tastic talk shows – Jerry Springer's being the worst – and ITV's recent drag-queen docudrama *Funny Girls*, about staff in Blackpool's Funny Girls drag club, can everyday transgender citizens establish their own identity? Is the visibility offered by these televised tabloids a trap? How does 'queer' differ from 'transgender', and what impact might any differences have on the rocky relationship between sexuality and gender? Finally, is there any need for this festival at all?

Initially we must accept that transgender means nothing in itself. Terminology dysphoria plagued me at the festival, and continues to do so. Yet this inability to categorize or order is surely a reflection of the breadth and diversity of the four-day programme of feature films, shorts, documentaries, debates and works of trans-representation focusing on crosscultural and transglobal expressions of transgender. Or is it?

The programme was certainly broad (perhaps too much so) but my dysphoria came from watching transgender movies,

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The programme was certainly broad (perhaps too much so) but my dysphoria came from watching transgender movies,

rather than movies about transgender people. That is to say, with the exception of *Ma Vie En Rose* (Alain Berliner, Fr./Bel., 1997), every presentation placed transgender characters and concerns centre stage as given, and not as an enigma to be solved (as in *The Crying Game* [Neil Jordan, 1992]). Watching a transgender movie necessitates abandoning heterosexist binaries, yet, in order to appreciate the ironies and struggles represented, we must retain our knowledge of such dichotomies. This dual viewing position was not alien to me as a gay man, but proved more challenging than I anticipated as I was invited to prioritize gender over sexuality (transgender over queer). Suffice to say, I was an accomplished – if transformed – viewer by the end of the festival.

Full-length features shown at this festival ranged from the relatively mainstream *Ma Vie En Rose* – feted with the festival's Alchemy Award for having the most positive and effective impact on transgender representation of any film in 1998 – to the world's first transgender porn movie, *Alley of the Tranny Boys* (Christopher Lee and J. Zapata, USA, 1998). The directors describe this as the first feature-length porn movie funded by, starring and marketed at transgender people. The 'gender community' (L. Feinberg, *Transgender Warriors* [Boston, MA: Beacon Press, 1996]) made a lucrative market, with every presentation packed out (especially the Late Night Tranny Porn). Spilling out of The Lux into Shoreditch, the transgender throng temporarily transformed nearby bars and parks into spaces for drinking, talking and networking.

The first festival was held in the same venue in 1997 and organized by Transmutation and Alchemy Productions. It examined key transgender films since 1954 – the most notable being *Glen or Glenda/I led Two Lives* (Edward D. Wood Jr, 1954) – and established a transgender genre. Filmmakers and the Festival directors, Zachary I. Nataf and Annette Kennerley, built on the success

of the first festival to move beyond Britain and consider expressions of what it does and does not mean to be transgender, as opposed to queer, elsewhere in the world.

Debates about representation and terminology were bound to be at the heart of this festival. The dominant view expressed by filmmakers and spectators was that transgender acts generically as a marker of difference, like queer. To be queer is, at its most basic level, to be different. The same is also true of transgender. This view of transgender as an umbrella term covering the spectrum of gender differences is certainly straightforward, and was popular at the festival, but the separation of sexuality from gender is not without problems. Gender and sexuality (transgender and queer) do overlap, as Judith Butler notes: 'homophobic terror. . . is often also a terror over losing proper gender' (*Bodies That Matter* [New York and London: Routledge, 1993]).

Ludovic, the eight-year-old star of *Ma Vie En Rose*, is crushed by the overlap between gender and sexuality when his parents and friends assume that his affection for his male friend, Jerome, is queer. When Ludo dons a dress and 'marries' Jerome, the wedding is interpreted as queer and the pair are separated and punished. For Ludo the punishment is doubly harsh: he is denied both his friend and his transgender identity. His position as a transgender child is erased because he lacks the language to articulate his identity and the power his parents enjoy to control discourse. Interestingly, it is Ludo's psychologist who explains that they will understand him when he gets the right words. We are left wondering why she does not give them to him.

Dr Susan Stryker, research fellow in transgender/transsexual history at Stanford University, Christie Elan-Cane, third gender activist, and Doran George, performance artist, formed the festival's Academic Panel, and debated 'The Postmodern Gender Condition: Theory v. Real Life'. After much

semantic to-ing an fro-ing, it was accepted that queer and transgender both demarcate cultural spaces (safe or not). So the drag queens , drag kings, transvestites, transsexuals, transpires (who only come out at night), female impersonators, butches, femmes, androgynes, hermaphrodites and intersexuals are covered by the term transgender – or are they? Can so much difference be captured in one category?

The deconstruction of transgender into the elements described above was most apparent in Lulu Ogawa's award-winning documentary, given its European Premiere at the festival, *We Are Transgender* (Jap., 1998). This won the Grand Prize at the 1998 Tokyo Lesbian And Gay Film Festival, capturing the full spectrum of the emergent yet ebullient transgender scene in Japan. Its success was due to the diegetic deconstruction of transgender into 'The Fake Ladies', 'Transvestites', 'FTM', 'MTF' and other categories, some of which do not translate from Japanese to English (thus highlighting the linguistic contingency of the transgender person). A series of talking-head scenes (some blurred to protect identities), *We Are Transgender* has a verite quality some may find naive; the hand-held camera makes the movie seem raw but lends sincerity. The feature ends with one of the Fake Ladies musing on the contradictory nature of language and representation, a central concern of this festival and its attendants, 'Why do we pursue the binary? We must free ourselves of that framework, but we depend upon it in a sense.'

In *Ma Vie En Rose* – and in just about every other film and video – transgender people labour under labels (frivolously, these are Versace and Gaultier in *We Are Transgender*), struggling to persuade those close to them that they are transgender rather than gay, lesbian or bisexual. Just as many queers have allayed the fears of mothers, fathers and friends concerned about cross-dressing, Ludo must convince his family that,

in his case, his outfit-swapping really does mean he is transgender (as opposed to transvestite or queer). In one of the most amusing and heart-rending scenes of *Ma Vie En Rose*, Ludo's new-found friend, Christine, struggles with the princess outfit she is forced to wear at her birthday party. Recognizing something of themselves in each other, the two children swap their uncomfortable clothes. This transgender direct action defies the parents and the other children, who are shocked by Ludo's and Christine's failure to 'do' their gender correctly.

As the representation of Ludo's experiences show, there are some similarities, as well as differences, between growing up gay and growing up transgender. At one point Ludo runs home in tears having been called queer. Hysterical, he demands that his mother tells him what queer means, and is told that he is not queer and must not worry. In many ways *Ma Vie En Rose* is a transgender *Beautiful Thing* (Jonathan Harvey, 1996). Like *Beautiful Thing*, *Ma Vie En Rose* revolves around a series of episodes where fantasy is juxtaposed with reality, and in the end fantasy and reality merge, albeit slightly heavy-handedly, with Ludo's mother pursuing him into a plastic fantasy world populated by a Barbie-esque doll and her Ken-like partner (*le monde de Pam et Ben*).

It was clear from the programme that behavioural expectations attached to gender vary crossculturally as, indeed, do conceptions of gender itself. Ludo suffers under the western male/masculine–female/feminine dichotomy, yet among those who identify as transgender in India (the Hijra), labels and the outward signifiers of gender are swapped, blended and toyed with to the benefit of their wearers. The third day of the festival was dedicated to the celebration of Hijra identities. In the documentary short *Jareen: Portrait of a Hijra* (Prem Kalliat, Ind., 1998) and the autobiographical documentary *Saheli Devi* (Ann Ogborn, USA/Ind., 1998) India's Hijra are portrayed as respected individuals called

on to perform at births, deaths and marriage. In most of the movies, the world of the Hijra was presented as a trans-utopia, where gender differences are celebrated and even revered. Yet it is debatable just how ideal the lives of India's Hijra really are, as the final short, *Eunuchs: India's Third Gender* (Michael Yorke, UK, 1998) revealed that many Hijra live and work in brothels.

The attempt to separate gender from sexuality, thus resolving their conflation in popular culture, constitutes part of the project of this festival, and is one of the main reasons for holding it outside queer space. Professionals on the Industry Panel asserted the need for a creative transgender space outside of queer space, and debated two tactics deployed in contemporary cinema and television to represent transgender people.

First they discussed the revelation or unmasking of a central character as transgender as the sting-in-the-tail surprise, as in *The Crying Game* or, more subtly, *Ma Vie En Rose*. Here the queer question – is he/she or isn't he/she? – is replaced by a transgender one – is s/he a she or a he? The panel argued that the context for this switching of taboos from queer to transgender was catalyzed by the relatively commonplace presence of queers in cinema and on television.

The second approach discussed sought to make it easier for a transgender person to get more work and a greater variety of it. Kristiene Clarke, whose short documentary *Trinidad* (USA/UK, 1992) was shown, argued that using transsexual actors in straight roles was one way of achieving this. Appropriately, *Coronation Street*'s Hayley (played by Julie Hesmondhaugh) was on hand to tell how her

ground-breaking character came to charm the nation. The difficulty with Clarke's approach was that the transgender actor's past must remain secret or else they would immediately become typecast as transgender in the eyes of the viewer. Whilst there is some evidence against this (Almodovar's use of known transsexuals playing characters who are not transgender) it was generally accepted that this was the case.

Again, the festival provided a space for a forum that would be difficult or impossible to have in a queer space, where such practical concerns – getting work without being typecast or colluding in your own oppression – are not central (though perhaps they should be) and in any case revolve around sexuality. Practicalities aside, the festival provides a unique creative space for a unique group whose work is always challenging, frequently entertaining and occasionally shocking. It is just as important for those outside the transgender community to see positive and non-stereotypical representations of transgender people as it is for the festival to be self-affirming for those within the community. Given this, and the creativity oozing from the transgender genre explored by this festival, the need for future International Transgender Film and Video Festivals is clear. Increased funding for organizers Transmutation and Alchemy Productions from current sponsors such as Film Four and The London Film and Video Development Agency would secure the event's future, and enable use of a bigger venue for an audience that is sure to expand.

Damian Barr

reviews

review:

Sean Cubitt, *Digital Aesthetics* (London: Sage, 1998), 192 pp.

LAURA U. MARKS

In the digital era which, depending on where we live, is either looming upon us or has left us in its dust, the greatest danger, according to Sean Cubitt, is that 'synergetic culture' will incorporate all diversity and thus inhibit the possibility of evolution. Technology has developed according to the needs of governments and multinationals, and in turn the multinationals have deployed technology to produce the kinds of individuals that meet their needs. What Cubitt calls the synergetic corporation is 'the true cybernetic organism of our time' (p. 134), and consumers and employees are its biochips. Individualism is not an effective resistance to corporate homogeneity, because individuality is constructed as a projection of the synergetic corporation. What falls out of the corporate–individual dyad is a sense of the social, and the reconstruction of the social is the central goal of digital aesthetics. Synergetic culture manages and incorporates differences into a false totality of corporation–individual that, Cubitt writes, is incapable of evolution. Because the synergetic corporations are infinitely capable of incorporating resistance (hackers get hired as programmers; 'every Nike slaying' reinforces the swoosh logo's prestige), Cubitt is rightfully suspicious of mere subversion of the dominant digital culture. He calls instead for the building of social alternatives, which are grounded in the materiality and locatedness of specific human-machine interfaces. The criterion for digital aesthetics to which Cubitt returns throughout the book is materiality – I am tempted to say, analogicity – because matter cannot be reduced to symbolic systems such as those served by

digitization. The analogue or indexical relationship is the source of the social.

The reconstruction of the social is the central goal of digital aesthetics. Cubitt reclaims aesthetics as a form of utopian realism: the yearning for a better possible world, where realism is defined as the appropriate use of technology for collective ends. Cubitt is cautious not to ascribe a content to utopian longing, mindful that a Habermasian programme for the future limits the freedom essential to utopian imagining. Instead, he argues that a digital aesthetics would create the conditions for a shared human–machine evolution, which can only proceed from serendipitous encounters within the 'primal soup' of random differences. What appears useless, because not coded as information, may in fact be the very source of life that helps us to evolve. His one formal prescription is that against organicism, since the goal of homeostatic integrity creates sterility in fields as different as genetics and art education. The cyborg model of evolution is admirable in its refusal to suggest that we humans are alienated by our technologies. However, Cubitt's argument retreats from this position at times when he overstates the ill effects of technologies on human sociality; for example, in his claim that people have internalized the rhetoric of recorded and transmitted voices to the point that now 'we listen without hearing, in order only to obey or rebut' (p. 107). Such occasional overstatements, and indeed the rather breathless tone of this slim but sprawling volume, may rebuff some readers from an analysis that is elsewhere pragmatic and optimistic.

The book is organized around histories of the media that compose the human–machine interface: the verbal interface, from books to hypertext; realist visual media; spectacular visual media; sound and transmission; and networked communications. In each chapter he critiques the use of technology to serve instrumental reason rather than evolution. In each he critiques the dematerialization of the analogue world to digital information. And in each he invokes the work of artists as exemplars of an alternative to centralized and dematerialized uses of digital technology.

Cubitt's first chapter, 'Reading the Interface', points out that hypertext, by forcing us to remain within its categories rather than imagine new worlds, feeds instrumental rationality. In an interesting sketch of the development of libraries from their monastic origins to twentieth-century classification systems, Cubitt argues that intertexts, such as the Library of Congress and Dewey decimal systems, classify knowledge and further its instrumentality. 'Knowledge is no longer formed from subjectivity but defined by the object-domain of the world' (p. 11). The movement towards instrumental reason in the rationalization and privatization of libraries is now dematerialized as on-line search engines. Search engines take us to the predetermined categories their programmers (and their corporate employers) want us

to look for; knowledge becomes a commodity. The apparent alternative is playful reading, such as surfing the Web or participating in MUDs. Because these modes are subjective and appeal to fantasy and masquerade, they would appear to offer some resistance to the instrumental, object-oriented search. But Cubitt points out that here too the illusion of choice offered in digital and on-line games disavows the fact that the range of choice has been limited at the level of programming. The on-line gamer's ego is reinforced in the faith that it plays within an ultimately knowable world. Games like SimCity are 'perfect training ground for a life within the corporate cyborg' (p. 139), the life of hyperindividual as autocrat. Also, he suggests, digital play attempts to forestall death; he argues that this fear of individual mortality must shift to a concern for the social.

The next chapter looks at virtual images that have their roots in documentary or indexicality. Analogue or indexical technologies, Cubitt suggests, are inherently social in that they embody perception. Digital media depend on Boolean algebra, which renders natural language into propositions free of interpretation. Computers refer to the world not indexically, or analogously, but in terms of the index or the catalogue. Thus a 'Boolean montage' can only work within the symbolic. Theorists have bemoaned the epistemological and ethical consequences of the severance of the indexical bond in digital media; Cubitt makes the more relevant suggestion that the fundamental abstraction required by digitization, the loss of 'indexicality, reference, articulation and address' (p. 35), deprives machine symbolizations of a potential sociality. For example, human perception is social, but artificial intelligence – the brainchild of computer science and cognitive psychology – is modelled on a dematerialized individual perception. Cubitt turns to artists such as experimental filmmaker Stan Brakhage and photographer Alfredo Jaar for examples of ways to reinvest body, sociality, and responsibility in the apparatus.

Another concern for documentary is the corporate monopoly of indexical images. In yet another reminder that multinationals are superseding nations as the world powers, privatized global imaging systems, such as LANDSAT, permit commercial exploitation of 'sovereign' territory, for example to get information about mineral deposits. The question for digital aesthetics is, what alternative modes of realist encoding can be imagined? Cubitt's tentative solution is the use of low-end, low-orbit satellites that would provide other social uses of global imaging.

While LANDSAT is a medium of corporate realism, Cubitt usefully characterizes the Hubble telescope's images as fantasy. The chapter 'Spatial Effects' offers a largely psychoanalytic analysis of deep-space imaging and science fiction. The longing for spectacular and sublime images links our neo-Baroque era to the first Baroque

age. Now as then, Cubitt argues, the dominant images are the distant universe and the virtual universe, inviting outward and inward contemplation by one who remains onanistically alone. Cyberspace similarly, he argues, appeals to a hyperindividual that constitutes its own subject and object of pleasure, on the model of the phallic mother, the ungendered one who makes possible all other fantasy positions. What digital aesthetics misses is the inter-human scale between these outer and inner infinities. This chapter's psychoanalysis of spatial fantasy lacked the foundation in concrete concerns that is one of *Digital Aesthetics'* main virtues. Call me anthropocentric, but I found Cubitt's characterization of a 'new orientalism of space' rather irresponsible, since we humans are not currently oppressing the outer-space population by extending our fantasies about these 'others' in imperialist acts, as we do to other humans. Similarly, his excursus on the cursor as the point of identity (that is, *point de capiton*) seems far-fetched, except that it describes the consumerist agency I acquire when I type in my credit card number on the amazon.com web site and click 'Order Now'.

Sound, Cubitt notes in the chapter 'Pygmalion: Silence, Sound and Space', is transcorporeal: it resonates within our bodies and connects our bodies with our environment. It is temporal and thus transient, and therefore should be a materialist medium. He notes a number of ways that digital media practices, and in fact all recording, tend to dematerialize and desocialize sound. Recording, he suggests, converts sound to information, invoking the origin of the sound only as absent object. Here Cubitt seems to retreat from the invocation of machines as partners to human evolution. What about the sounds that recording allows us to hear for the first time; are they not machine-aided perception, rather than information? Headphones, too, he suggests, dematerialize both the world and the body of the listener, creating a Cartesian soundscape. He notes a similar pattern in cinematic sound: movies are becoming more like computer media, in that they reconstruct a virtual world from information, rather than from indexical reference to matter. Drawing from the distinction between classical and realist sound cinema, he suggests interestingly that sound in the current cinema is neo-classical, in that an auditory depth of field creates atmosphere, while sound effects are concerned not with authenticity but with spectacular effect. Now it is 'the diegesis, not character, narrative or reality, that forms the centring device' (p. 116). So in neo-classical cinema too, a virtual world is reconstructed from information.

To inspire a digital-aesthetic solution to the problem of dematerialized sound, Cubitt draws on a visual and decidedly non-digital artist. Ian Hamilton Finlay's gardens make use of the emblem (for example, by inscribing words on trees), which rebuilds the link between living thing, word, image and sound. Yet digitally reconstructed sound need not abandon its connection to the material

and social world, as Cubitt shows in his discussion of African diasporan music. It is in Trevor Mathison's soundscapes for the Black Audio Film Collective's *Who Needs a Heart?* and *The Last Angel of History* that Cubitt first finds an example of digital aesthetics in the digital realm itself. Mathison borrows, abstracts and remakes sounds from the diegetic world of the film, on the model of cultural translation that has always been the diasporan artist's mode; yet in so doing makes the film a 'documentary of the imagination, documentary of the non-existent future' (p. 119). In looking for current practices of utopian digital aesthetics, Cubitt has found a rich resource in the work of diasporan artists who have always worked a tradition from its margins, unhampered by classicism with its faux individual subject.

In the final chapter, 'Turbulence: Network Morphology and the Corporate Cyborg', Cubitt looks to amateur and diasporan practices for alternatives to the transmission model of corporate broadcasting. These practices produce the new raw material that evolution requires: amateurs through their personal (as opposed to hyper-individual), non-instrumental production; diasporan peoples through acts of creative translation, such as the translation and transformation of musical styles throughout the African diaspora. Because translation is always imperfect, it spoils the pure transmission of information: it reintroduces noise, materiality and history. He offers some models of alternatives to synergetic culture, such as the web sites Jodi and The Great Wall, which 'are willing to sacrifice the semantic to the random flaring of connections' (p. 141). Rather than 'transmit' information, such sites treat information as raw material. I would also note that digital aesthetics can emphasize the means of transmission and translation and the constraints of band width and obsolete hardware. A number of Web artists build this acknowledgement of the politics of materials into their work, such as Britain's ASCII Art Ensemble and the vuk.org web site that proudly announces, 'This site was built on a 40 megabyte hard drive'.

A reader might disagree with Cubitt's insistence that synergetic culture has engulfed the world, and instead point to poor countries and peoples whose use of new technologies is at worst nonexistent, at best a creative bricolage of obsolete machines. But Cubitt's concern with real alternatives, not just resistance, forces us to ask whether these seemingly resistant practices are a basis for utopian realism, or just a sign that whole regions of the world, having been written off by the synergetic corporations, will plunge further into immiseration. Cubitt's extremism in arguing that synergetic culture has enmeshed the whole world forces us to look for a world-scale alternative. Most admirably, Cubitt never stops at hand-wringing but always offers suggestions, based in current practice, for how these alternatives might be built.

review:

Humphrey Carpenter, *Dennis Potter: a Biography.* London: Faber and
Faber, 1998, 672pp.

John R. Cook, *Dennis Potter: a Life on the Screen* (Second Edition).
Manchester and New York: Manchester University Press, 1998, 389pp.

Glen Creeber, *Dennis Potter: Between Two Worlds. A Critical
Reassessment.* London: Macmillan, 1998, 219pp.

PHILIP SIMPSON

'Dennis Potter is (a) The greatest dramatist of the television age;
(b) A flawed genius; (c) A dirty old man; Discuss'. In this way,
The Times television critic characterized attitudes towards Dennis
Potter after the screening of *Blackeyes* on BBC2 in 1989. These
three useful books will all help the discussion.

  Dennis Potter: a Biography will help us with (c). This was
certainly the way that it was taken up by press and television
reviewers who picked over the details of Potter's sexual abuse at the
age of ten by his uncle, the parallels between Potter's treatment of
Kika Markham and Gina Bellman and their roles in *Double Dare*
(1976) and *Blackeyes* (1989), and Potter's claims to more than one
hundred encounters with prostitutes. Writing about Carpenter's book
in this way, though, is as likely to act as a turn-off rather than as a
come-on for *Screen* readers, I am sure. Despite the fact that the book
is a real page-turner, however, there is much that the more high-
minded student of Potter will find worthy of attention. Carpenter
carefully attempts to authenticate biographical details though cross-
reference, citing all his sources and providing a distressingly detailed
index for the less industrious student.

Some of my facile assumptions about Potter's education were destroyed, for example, by Carpenter's careful research. With some assistance from Potter's plays and interviews, I thought that he had gone straight from the Forest of Dean to Oxford, there to be bewildered by contemporaries like Peter Jay, Kenneth Baker, Julia Gaitskell and Margaret Forster in a continuation of the victimhood that began at primary school and which was to be so much a concern of his plays. Carpenter, however, makes it clear that Potter was an exceptional pupil at one of London's best grammar schools between primary school and university, and became a flamboyant and popular figure at Oxford. As well as being active in university politics, editing *Isis*, writing his novel *The Glittering Coffin* and appearing in *The Caucasian Chalk Circle*, Potter also made his first television appearance in a documentary *Does Class Matter?* – a question he neither wholly ignored nor answered for the rest of his life.

Carpenter also offers detailed insight into the minutiae of Potter's institutional struggles. The tussles with his closest and most regular collaborator Kenith Trodd are sensitively documented, from their meeting in the army in 1953 to Potter's death and beyond, and there is much useful detail about Potter's earnings and financial dealings. The details of Potter's illness and its treatment are also documented, and Carpenter's dispassionate treatment reminds us that, in this respect, for all that Potter can sometimes seem to be a mythomane, he was heroic.

Two things, among many others, may strike the reader whose interest is as much in television as in Potter. First, public service television's commissioning practices in the 1970s: the Director General of the BBC personally banned *Brimstone and Treacle* from transmission in March 1976, yet in July the Head of Plays for BBC commissioned Potter to write six plays having 'a linking character who is a ghost writer for the famous' (p. 333). In March 1997, Kenith Trodd reported that Potter had delivered to him the first play in the Ghost Writer series: 'The title is *Down Sunny Side Lane* and the series is now called *Pennies from Heaven*' (p. 345). The BBC's commissioning procedures obviously lacked effective quality control in those days: could this kind of thing still happen? If not, why not?

Secondly, the extent to which television was a writer's medium. All three books stress this fact, and it is clear that Potter exploited it throughout his life. Those who shape British culture, in education as much as in broadcasting, always seem happier to emphasize the distinctive and the individual for praise or blame. When, in the late 1950s, British television drama began to distinguish itself from filmed theatre, it still retained the commitment to the writer. Potter explicitly saw television as the medium by which he could reach a wide and diverse audience, but it may have been as much the structure of British television over the next two decades which

delivered that audience to him as it was his own talent. Furthermore, watching so many of Potter's most widely respected plays one is struck by the powerful acting and direction.

John Cook's book takes up this latter point in an unsympathetic response to Joost Hunningher's article in *British Television Drama in the Eighties*[1] which credits the director, Jon Amiel with much of the 'look' of *The Singing Detective* (1986). Cook describes Hunningher's account as 'somewhat perverse' given that for the plays 'Potter reaches so closely into himself' (p. 349). But is it Potter's 'self' that we are responding to when we see Michael Gambon's portrayal of anguish? There is a need to consider things like these in any assessment of the impact of Potter's dramas.

If the discussion is about (a) – Potter as 'the greatest dramatist of the television age' – then John R. Cook's book is the one to which we will turn. At the end of the first edition of this book, Cook gave the last words to Kenith Trodd, and seems to endorse the latter's view of Potter as a great writer and a 'Great Man'. *A Life on the Screen* is a book about Potter as author, and Cook is dismissive of counter arguments. Following the chronology of Potter's life, it makes detailed use of Potter's interviews, including one given to him by Potter four years before his death in 1994. (For a man who described himself as a recluse, Potter seems to have made himself and his views more available than most writers.)

Cook's approach to Potter is appropriately exhaustive: he takes into account Potter's novels, and his television and film adaptations, and outlines the changes in production circumstances from Play for Today to independent film production in the 1980s. He achieves what he sets out to do:

> to follow the 'yellow brick road' of Potter's artistic life on screen with a view to showing a consistency and progression of 'authorial' themes (p. 282).

The themes are there: Potter's complex and changing sense of the spiritual, his hopes and evocations of the 'common culture' of television transcending the differences in his audience, his ambivalence about sexual relations with women, the perception of a Fall, and the sense of loss, which sometimes seem to be the master concepts for an understanding of Potter's writing. Nor does Cook make simplistic connections between the life and the work; he is sensitive to Potter's self-conscious and deliberate re-working of his experiences.

Though Cook frankly admires Potter, and his work, the book is not just a celebration. His vicious condemnation of Carpenter's biography, before that book was published, is unnecessarily defensive and at odds with the reasoned tone of the book as a whole. It sounds as if 'ownership' of Potter's legacy is being claimed. The section on *The Singing Detective* represents the book at its best: Cook's

1 George W. Brandt (ed.), *British Television Drama in the 1980s* (Cambridge: Cambridge University Press, 1993).

argument that Potter's work bears a metaphorical relationship to the writer's life is persuasively set out. It avoids the kind of reductiveness with which Potter's work is always in danger of being treated, though there are times when another kind of reductiveness seems imminent: are there not issues about society, culture, relationships, or even television, discernible in Potter's plays and films which go beyond his life on screen?

For an approach to some of these ideas, and a more explicitly theorized set of readings, we can turn to *Dennis Potter: Between Two Worlds. A Critical Reassessment*. As the title proclaims, this book offers a discussion closer to (b), Potter as 'flawed genius', though the exam rubric is, in truth, unfair to all three books. Glen Creeber attempts:

> To study (Potter's) television drama without allowing the almost mythical status of his life to dominate the critical agenda. (p. 18)

Within these terms he is successful though, as in Cook, lengthy or frequent quotations from Potter speaking outside the dramas are used to sustain the argument.

Inevitably, some of the ground covered is similar to that of Cook's book. Though the latter offers more discriminating detail, both acknowledge the influence of Troy Kennedy Martin on Potter's non-naturalistic approach to television drama. Potter clearly knew about Brecht from his Oxford days, but his desire to disorient the viewer 'in the middle of the orientation process which television perpetually uses' (cited p. 55), seems to owe more to the climate of ideas articulated through Kennedy Martin in 1964. Of as much significance to Potter as distancing effects was his realization that the 'grammar of television' enabled him to show what went on in people's heads: 'interior characterization' as Kennedy expressed it. Creeber is equally emphatic about Potter's realization that the medium of television and the potential to reach and build a regular, large audience provided the institutional framework he needed.

What is most interesting about Creeber's book, though, are the ways in which he deals with Potter's attitudes to women and British popular culture. Though all three authors engage with these topics, Creeber seeks to place them in the wider context of cultural studies and screen theories about the representation of women. In a book which is one third the length of Carpenter's and two thirds the length of Cook's, discussion is not extensive, but Creeber's approach of grouping topics thematically is the most productive.

The final chapter, for example, about Potter's reputation for 'darkly misogynistic' portrayals of women, examines *Casanova* (1971), *The Singing Detective* and *Blackeyes* within a broadly psychoanalytic framework. Creeber proposes that the dramas show a development from the portrayal of women from an unselfconsciously male point of view, as passive objects, to a disastrous attempt in

Blackeyes to address issues surrounding the cultural representation of the female subject. Potter's greater consciousness of challenges to the dominant representations of women is thematically central to *Blackeyes* but, in part because of production circumstances which allowed Potter to be writer, director and narrator of the four-play series, the central female figure is often positioned for the viewer as objectified, and 'the voyeuristic perspective of the male gaze tends to be maintained and reaffirmed' (p. 182). In between *Casanova* and *Blackeyes*, Creeber argues, lies the much more successful *The Singing Detective*, which attempts self-consciously to deconstruct its own portrayal of women and sexuality. Though this six-part production ends ambiguously, the roots of Philip Marlow's misogyny have been acknowledged, partly as a result of the way in which the virtual collapse of his body has forced him to interrogate his desire and fear in relation to women. Creeber's argument is not particularly detailed or exhaustive, but it does propose a way into understanding the construction of sexual identities that is relevant to both other Potter plays and to the larger debate about gender representations in television drama.

Another chapter of Creeber's book groups *Where the Buffalo Roam* (1962), *Moonlight on the Highway* (1969), *Follow the Yellow Brick Road* (1972) and *Pennies from Heaven* (1978) in an exploration of popular culture. Potter's attitude to popular culture is richly ambiguous. His commitment to television, his 'guilty dream... the possibility of a common culture' referred to in 1992, is related to its potential to reach and unify a national audience – *Pennies from Heaven* attracted audiences of over twelve million. Similarly, the use of music in *Pennies* and other plays testifies to Potter (and Trodd's) awareness of the potency of popular songs, and *The Singing Detective* adds to this the figure of the detective from hard-boiled, noir fiction. Creeber evokes an array of writers on popular culture, from Adorno and Foucault to Gramsci and John Fiske, to deal with Potter's ambiguities. As with the chapter on sexuality, more is implied than is actually worked through, and some of the connections made seem contradictory. But, for the British reader at any rate, Creeber's reference to Richard Hoggart and *The Uses of Literacy* (1958)[2] provides both an acute reminder of the cultural conjuncture out of which these plays emerged, and the nostalgic conservatism of their use of music. The songs used in Potter's plays seem always to propose that there was a time when despised American songs, or even American-style songs, had a unifying, almost folk-art or community validity for the British. But the period always seems to be 'then', never 'now'; *Pennies* offers the 1930s, *The Singing Detective* the 1940s and *Lipstick on Your Collar* (1993) the 1950s. Will the fragmented audiences for television drama in 2020 be pulled together again by a middle-aged group of women lip-synching 'Tell me what you want, what you really, really want' in

2 Richard Hoggart, *The Uses of Literacy* (London: Penguin, 1958).

some male fantasy? It is more likely that Creeber's quotation from *Culture and Society* tells the truth: 'If there is one thing certain about "the organic community", it is that it has always gone' (p. 57).

Dennis Potter: a Life on the Screen and *Dennis Potter: Between Two Worlds* both come from researchers at British universities, and they will no doubt find most of their readers in universities. No bad thing, but they join an already existing and extensive reading list on Potter which the stroke of a key can deliver. Is that not enough? Is it not time for more about television writers like David Mercer, Alan Plater, Kay Mellor and Jim Allen, and producers like Tony Garnett and Philip Saville. Or are we about to embark upon another Great Tradition which will canonize another red-haired genius/writer, the son of a miner, with a tendency to fall out with his friends, hold odd views about women, and give way to the occasional rant? I hope not.